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ORIGINAL ARTICLES.

ABSCESS OF THE LUNG, WITH REPORT OF SEVEN CASES.

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The subject to which I invite your attention is one of peculiar interest on account of the difficulties surrounding its diagnosis and the brilliant results that not infrequently follow its proper treatment. Abscesses of this variety are either primary or secondary; primary when the direct result of injury or exposure, as for example the entrance of foreign bodies into the air passages or such exposures as often eventuate in pneumonia; secondary when the direct result of some antecedent disease, as for example tuberculosis, pyemia or embolism.

An abscess of the lung may be described as a circumscribed collection of pus within the pulmonary parenchyma. It is usually characterized by pain at times very severe, by chills and fever, and later by the expectoration of a small amount of blood, followed shortly afterward by a considerable quantity of pus which usually escapes within a few hours. As a result of the inflammation a small or a considerable mass of lung tissue may be destroyed, but usually in the primary abscess the tissues are crowded before the collection of pus, and only a limited part becomes necrotic. Primary abscesses (in which we are chiefly interested), are comparatively rare, but secondary pulmonary abscesses, especially those of tubercular origin, are very frequent; the latter, however, I do not wish to consider at this time, because the symptoms and signs which they produce are quite different from those produced by the primary affection and also because the treatment and the results of treatment are not like those of the primary disease.

Etiology.—Primary abscesses usually result from exposure, from the entrance of foreign bodies into the air passages, from injury and for our present purpose I will say from pneumonia. Secondary abscesses result from pyemia, embolism, syphilis, the pressure of tumors upon the bronchi, suppuration of bronchial glands, and from perforating abscesses below the diaphragm, or within the mediastinum. Although my remarks apply to the secondary abscesses that are not tubercular, and to a limited extent even to the latter, they are mainly applicable to primary abscess and to abscesses resulting from acute pneumonia which present the same symptoms and demand similar treatment.

Symptomatology.—The primary pulmonary abscess usually speedily follows some exposure or accident which causes acute inflammation of the lung, the inception being marked by a chill and fever, very similar to that of croupous pneumonia, though commonly neither are quite so severe as in the latter disease; however, the abscess may not occur until sometime after the acute stage of the pneumonia has subsided. In either case the formation of pus is attended by repeated rigors followed by hectic fever similar to the symptoms indicative of suppuration in other parts of the body. Pain, sometimes very severe, is usually present in the beginning of the disease. The temperature fluctuates two or three degrees during the day corresponding to the irregular chills and fever. In the milder cases although the pulse is rapid the fever is not pronounced; but in most instances the constitutional symptoms are very like these of croupous pneumonia, and they are apt to continue for two or three weeks. In favorable cases spontaneous opening of the abscess and convalescence may be expected within twenty or thirty days and in most of them the pus will escape within ten or twenty days. The abscess may open into the bronchi, mediastinum, pericardium or pleura, or through intervening adhesions may discharge its pus into the abdominal cavity or externally. The discharge of the contents of the abscess is usually preceded by a few drops of blood or bloody pus which is followed by the expectoration of from a few ounces to a pint or more of yellowish or greenish pus. The pus is apt to be brownish when there is considerable necrosis of lung tissue. The contents will escape freely for a short time, or possibly for several hours, until the abscess is emptied, when the opening is liable to close for two or three days; it may then be reopened and give vent to a copious discharge. The pus is not usually offensive except when it has been long retained or gangrene has occurred. The sputum generally contains small yellowish or dark pieces of lung tissue visible to the naked eye that upon microscopic examination are found to consist of elastic lung tissue.

The essential signs of the disease are: dullness with feebleness of respiration or absence of the respiratory murmur over the abscess combined with indistinct râles in the lung tissues immediately about it and sometimes with bronchial breathing. After escape of the pus the well-known signs of a cavity may be present for a short time, though in the primary affection the lung is apt to contract speedily so that cavernous respiration is present for only a few hours; or refilling of the cavity with pus may prevent the respiratory and vocal sounds common over a vomica.

Diagnosis.—The affection is liable to be mistaken for bronchitis, pneumonia and acute or chronic pleurisy. The most important features in the diagnosis are the occurrence of symptoms similar to those of acute croupous pneumonia, but followed by irregular chills and hectic fever indicative of the formation of pus and dullness more or less circumscribed that is apt to be more distinct over a small region than that of pneumonia but less distinct than in pleurisy.

Atypic respiratory and vocal signs unlike those we expect to find either in pneumonia, pleurisy or bronchitis, are a most important element in the diagnosis and finally the sudden expectoration of a considerable quantity of pus containing elastic lung fiber reveals the true nature of the disease.

Bronchitis.—Bronchitis is to be distinguished from pulmonary abscess by absence of the irregular chills and fever common in the latter disease, by the comparatively slight fever in bronchitis; absence of dullness on percussion and the presence of bilateral mucous râles; by frothy and subsequently muco-purulent expectoration instead of the purulent expectoration of abscess, and by the quantity and time of occurrence of this expectoration. The sputum in bronchitis is at first frothy and subsequently gradually becomes muco-purulent; whereas in abscess of the lung there is usually little or no expectoration at first, but finally a large quantity of pus preceded by a few drops or drams of blood.

Pneumonia.—In pneumonia the symptoms and signs are much like those of pulmonary abscess, indeed this disease is very liable to obscure the signs of abscess, but a careful review of the symptoms and signs will generally enable us to make a correct diagnosis, except in cases where the abscess results from a primary croupous inflammation. In the beginning of pneumonia we have a severe chill instead of the irregular chills and fever indicating suppuration; yet abscess of the lung may have been preceded for a few days by all the symptoms of pneumonia. In pneumonia there is usually more or less distinct dullness over the greater portion of one lobe or more, of one lung, slight in the beginning but well marked later on. In abscess of the lung the dullness is apt to be circumscribed at the middle or upper part of the lower lobe and the area smaller than in croupous pneumonia. The dullness may be more pronounced than in pneumonia, when the abscess is close to the surface, or scarcely discernible when the collection of pus is deeply seated and a considerable quantity of healthy lung tissue intervenes between it and the chest wall; but in most cases of abscess the dullness eventually becomes pronounced and distinctly circumscribed and it is liable to be surrounded in every direction by fair pulmonary resonance.

Upon auscultation in pneumonia, distinct crepitant râles are heard in the beginning, distinct bronchial breathing later on and still later the subcrepitant râles of resolution; but in pulmonary abscess the respiratory sounds are atypic and commonly very confusing. At first over the abscess there may be no sign excepting a feeble respiratory murmur, though if the abscess is near the surface there may be entire absence of respiratory sounds due to occlusion of the air vesicles and smaller bronchi, by compression. Usually, however, there are a few subcrepitant and larger bronchial râles in a zone two or three inches wide about the abscess and there may also be a few crepitant râles; but these signs are much less numerous and less distinct than in typical pneumonia. It will be readily understood that location of the abscess near the surface, or deeply seated would necessarily change the character of the respiratory sounds over it.

To me the most important elements in the diagnosis of this affection consist of the indistinctness of the respiratory murmur and the irregularity and confusing character of the râles all of which are very different from the typical signs of pneumonia or pleurisy. The signs are such that the physician, even though an expert, after having made a thorough physical examination is inclined to admit (to himself at least) that he does not know what is the matter. A careful consideration of the history of such a case including all predisposing and exciting causes together with a study of the early symptoms, taken in connection with the atypic signs will generally lead to a correct diagnosis.

Acute Pleurisy.—In pleurisy as in abscess of the lungs there are apt to be irregular chills and fever, but the chills and fever of pleurisy occur in the beginning and are not followed after three or four days by rigors and hectic indicative of suppuration. In pleurisy the discovery of friction sounds and fremitus in the beginning is important in differentiating it from abscess, but frequently these signs are not very different from the irregular râles which are heard in the latter disease. After the effusion of fluid in an acute pleurisy the dullness necessarily extends to the lower limit of the pleura and becomes more pronounced than in an abscess. There is also a change in the level of the fluid on changes in the patient's position, and absence of vocal fremitus when the patient speaks; signs which do not occur in abscess. Contrary to the usual teaching, the respiratory and vocal signs though feeble, are not entirely lost over the upper part of a pleuritic effusion, but they are usually less distinct than over an abscess. In acute pleurisy the fever commonly subsides from the third to the fifth day and after this time we do not have irregular chills and hectic fever such as indicate the formation of pus. In pleurisy the displacement of the heart to the opposite side is an important sign which does not occur in the abscess of the lung. In acute pleurisy we do not get the expectoration characteristic of the disease under consideration.

Chronic Pleurisy.—In this disease we are apt to find a very different history from that of pulmonary abscess. Empyema, when involving a large part of the pleural cavity may be easily distinguished from abscess of the lung by the well-known signs of a pleuritic effusion, but when circumscribed the signs are not characteristic. In a case coming to us several weeks after the inception of the disease a physical examination may reveal only a limited area of distinctly circumscribed dullness; the cavity may have opened into a bronchus and the patient may be raising large quantities of pus so that neither by the physical signs nor symptoms could we distinguish between the two affections with accuracy. In such cases a microscopic examination of the pus may reveal the true nature of the disease by discovering elastic pulmonary fiber in the case of abscess, but none in empyema.

Prognosis.—Pulmonary abscess may prove fatal within four or five days, but usually even fatal cases extend over two or three weeks or sometimes many months. When an abscess opens spontaneously it usually does so within three weeks. In unfavorable cases, especially of secondary abscesses, many of the patients die of exhaustion or as the result of infection of some other part, and others succumbed to repeated inflammation of the lung tissue about the pus cavity. Abscesses of the lung resulting from pyemia, gangrene, tuberculosis, embolism or the infectious diseases are necessarily very grave. Those that we have classed as primary are much more likely to recover.

Treatment.—The treatment of abscess of the lungs

when of secondary origin must be that appropriate for the primary disease with such tonics and stimulants as appear necessary and ample nourishment. The early treatment of primary pulmonary abscess is very similar to that of lobar pneumonia. In practically all cases the expectant form of treatment is the best in the beginning, but when an abscess can be distinctly located, especially if near the chest wall, the question of surgical interference must be considered. Remembering the natural tendency of this disease and the possible dangers of an operation, I believe that the greatest good to by far the greatest number of patients will be obtained by pursuing the expectant plan for at least three or four weeks. I know that some cases may be shortened by an earlier opening, but I am satisfied that some lives would be lost by this procedure which might be saved by waiting. After three or four weeks if the abscess does not open spontaneously and an accurate diagnosis can be made surgical measures should be adopted. The comparative safety with which surgical operations may be made under antiseptic precautions and the glamour surrounding extensive and showy operations strongly tempt the surgeon to cut down at once, resect one or more ribs and perforate the lung to allow the escape of pus. That this operation is proper and desirable, in certain cases we do not deny but that it should be held as a dernier ressort seems to me to have been demonstrated by common experience and by the records of a few cases in my own practice, brief histories of which I will presently give.

Aspiration alone is competent to effect a cure in many cases where necrosis of lung tissue is small, even though the collection of pus may be large. Aspiration combined with washing out of the cavity by disinfectant solutions would be effective in others, but where there is a considerable necrosis of lung tissue or where aspiration has been tried and failed, the more radical operation of cutting down and resecting a rib and then perforating the lung by the thermo-cautery should be adopted. When we have decided that an abscess of the lung is present, or when after a thorough examination by a competent diagnostitian we are led to believe that one exists, exploration to discover the pus should be made, in several places if necessary, with a fine clean needle at least three inches in length. Having in this way located the abscess, aspiration may be done by any of the common instruments and a comparatively large needle. It has always been my custom to disinfect the aspirator needle by dipping it into a solution of equal parts of carbolic acid and olive oil or oil of almonds, and it has seemed to me that this strong solution is especially beneficial in cauterizing the tract of the wound and thus preventing absorption of purulent matter. The pus cavity should be emptied by the aspirator and the operation repeated at the end of five or ten days if it refills, and again and again if necessary. The question of washing out the abscess will have to be determined by the indididual operator; but usually it is not best unless the pus is very offensive, when there is reason for believing that a considerable mass of gangrenous lung tissue is present within the abscess cavity.

When an abscess results from gangrene or from any other cause that leads us to believe free drainage necessary, and after aspiration has been tried and failed we should resect a rib in the ordinary method. If the pulmonary pleura is found adherent to the costal pleura we may at once open the lung with the thermo-cautery; if not, the two should be stitched together and fifteen or twenty-four hours allowed for adhesion to take place before the lung is opened, in order to prevent the escape of pus into the pleural sac. Preliminary aspirations as already recommended will usually excite adhesive inflammation if the latter has not already occurred in the natural course of the disease so that the stitching will be unnecessary. Having made a free opening and secured adhesion of the two pleural surfaces it only remains to open through the lung tissue and introduce a large sized drainage tube, or tubes, after which it is managed in the same manner as other large abscess cavities, the patient being supported by tonics and nutritious diet.

In illustration, I have to record briefly a few cases that have come under my own observation in private practice. Of the first case I have no notes, of the second a brief record, of the third case I have complete notes regarding the laryngeal condition, but only a very concise history of the pulmonary abscess though it occurred so recently that I have the features of the case clearly in my mind. Of the fourth case I have no notes, of the last three I have good records.

Case 1.—About ten years ago I was called to see a physician between 50 and 60 years of age, who had been hunting a few days previously and returned with the symptoms of acute pneumonia. Upon examination of the chest I found signs suggestive of pulmonary abscess, but a positive diagnosis was not made until a few days later when the abscess opened spontaneously and the pus was evacuated. In this case the cavity rapidly contracted and the man made a speedy recovery; the whole duration of the disease probably not occupying more than four weeks.

Case 2.—Mrs. D. F., aged about 40. This patient I first saw in July, 1894. She presented obscure symptoms pointing to inflammation in the region of the diaphragm involving the liver and later apparently involving the pleura and lung. She had suffered from the disease for many months when I first saw her, and was in a low condition when she came under my constant care a few weeks later. It was impossible to make a positive diagnosis, but about six weeks later I became satisfied there was an abscess in the lower outer corner of the right mammary region; this I aspirated and withdrew a few ounces of pus; subsequently it refilled, and eventually a small quantity of pus continually escaped from the wound made by the needle. She had been expectorating purulent material at times, and every few days had been evacuating several drams of pus from the bowels. Early in November, I resected portions of two ribs, and penetrating about half an inch of lung tissue came upon a pulmonary abscess which communicated through the diaphragm with an abscess cavity of the liver, and by an obscure opening with the bronchial tubes. Large drainage tubes were inserted and the wound treated in the most approved manner; but she failed more rapidly after the operation and died in about three weeks. What the result in this case would have been if the operation had been made sooner can never be known, but from the patient's history and symptoms I believe that had the abscess been opened earlier death would have been correspondingly early.

Case 3.—Mrs. W. G., aged 28, came under my care March 17, 1894, suffering from stenosis of the larynx. She had great difficulty in breathing and was much emaciated. The history and appearance of the larynx convinced me that the obstruction was due to the contraction of syphilitic cicatrices. The cords were adherent nearly to their posterior extremities and the caliber of the glottis was reduced 80 per cent. I opened the glottis with Whistler's cutting dilator and subsequently kept it dilated with O'Dwyer's large tubes until healing had occurred. The patient improved greatly in flesh and general condition, and was about to be discharged when I was sent for to visit her at her lodgings. I found her suffering with severe pain in the right side and dyspnea, with all the symptoms of a sharp attack of acute pleurisy. The room was cold and conditions were such that a careful examination of the chest could not be made without too much exposure, therefore I contented myself with a diagnosis of acute pleurisy and prescribed accordingly. The pain was relieved by

anodynes; but four days later the abscess ruptured and the patient expectorated large quantities of offensive pus with a little blood. The pus was also aspirated into the surrounding bronchi and greatly increased the dyspnea; secondary infection and inflammation speedily followed so that she rapidly failed and succumbed to the disease about thirty-six hours after the opening of the abscess. This case illustrates a syphilitic origin and a rapidly fatal course.

Case 4.—Mr. X., about 22 years of age, was seen by me in consultation some three years ago. I found him with what might be called typical signs of pulmonary abscess, because they were so much like, yet not typical of, pneumonia or pleurisy. There was dullness on percussion, and a feeble respiratory murmur with indeterminate râles over and about the abscess. I found a valvular lesion of the heart that explained the origin of the disease. The history showed that the inflammation had come on suddenly and that after a few days the pus had escaped, but the abscess cavity had subsequently closed to reopen again in about forty-eight hours. This opening and closing continued for some days, but the man eventually died. This case illustrates the origin, course and termination of embolic abscesses.

Case 5.—S. J., aged 36, came under my care Jan. 8, 1884. He stated that eight months previously he had an acute attack of inflammation in the left lung and that thirteen days later he had expectorated about a quart of offensive matter. With the attack he was confined to his bed about four months, since that time he had been expectorating pus at irregular intervals. He had formerly weighed 168, but had lost 44 pounds. At the time of my first examination the pulse was 110 and irregular, but the temperature normal; the appetite was poor and the digestion imperfect. He suffered very much from dyspnea upon exertion, had a spasmodic morning and evening cough and said that he expectorated about a pint of purulent offensive matter daily. About ten weeks previously on two occasions after a particularly hard coughing spell he had expectorated a few drops of blood. A careful physical examination revealed a little flatness in the left infra clavicular region. The left side measured sixteen and one-half inches, the right sixteen and three-fourths to seventeen and one-half just below the nipple. The heart was in its normal position. The respiratory sounds were feeble at the upper part of the left lung and lost below, but there was slight vocal fremitus. The right side was normal. I introduced an aspirator needle between the seventh and eighth ribs near the angle and drew off four ounces of very offensive pus; as the last of it came away he felt like coughing and the pus became bloody. That night he slept all night which was the first time since the beginning of his illness. Six days later it was noted that he had coughed about as much the preceding night as before the aspiration. Another aspiration was made, but at this time only about one ounce of pus escaped followed by blood. Fourteen days later the aspirator needle was again introduced but no pus was obtained. He was given tonics consisting of iron, quinin and strychnia and also the chlorid of calcium. One month after the first operation he had gained eleven pounds, and ten days later it was noted that he weighed twenty-five pounds more than at the first operation. He continued to improve rapidly in weight though he was still annoyed by a cough for several weeks. The dullness over the lung subsided slowly, and I did not consider him perfectly well until about four months after he first visited me. He is still living in good health and has had no recurrence of the pulmonary trouble or any indication of tuberculosis.

Case 6.—Mr. W. W. G., aged 19, came under my care first in Sept. 1888, complaining of cough and loss of strength. Four months previously he had suffered from an attack of what appeared to be pneumonia from which he had recovered except that the lung did not fully clear up. About four weeks before I saw him he began to feel ill again, having slight chills and fever which continued for about twenty days. He had been better for some ten days just before I saw him, and the fever had mostly disappeared, but the cough was very troublesome. Physical examination revealed circumscribed dullness over the lower part of the right lung. I aspirated and withdrew twelve ounces of pus which was not offensive in odor. Five days later I aspirated again and withdrew ten ounces of pus when it became necessary to desist because of cough and pain. About a week later I again aspirated and withdrew a smaller quantity of pus. Three weeks later the dullness over the lung continuing, I thought it would be necessary to introduce drainage tubes, but making explorations in several places no pus was discovered. The young man continued to improve and shortly after went to Colorado where he has remained since. About a year later, happening in Colorado Springs, I made a careful examination of his lungs and found them in perfect condition except a scar from the old disease. He still continues in perfect health. In this instance there was apparently abscess of the lung as a sequel to pneumonia. There was at first some question as to the diagonsis in this case, but the pus was so distinctly circumscribed and so deeply seated, and the respiratory murmur in other portions of the lung was so distinct that after aspirating I felt confident that it was an abscess though I did not make microscopic examination.

Case 7.—C. A., aged 16, came to me in July, 1895. His history showed that the previous April he had suffered from inflammation of the lung and that subsequently he had frequent chills and fevers, with cough and free expectoration of pus. The boy was pale and sallow, and had lost considerable flesh, but he had no fever at the time I first saw him, although his pulse was 132 per minute. Physical examination showed the heart in normal position and revealed considerable dullness at the lower part of the right lung, more pronounced over a limited area a little below the spine of the right scapula. A feeble respiratory murmur could be heard about this spot, vocal resonance was diminished and vocal fremitus absent over some parts of the lung in the vicinity, but the signs could not be satisfactorily accounted for by the hypothesis of either pneumonia or pleurisy. This case was first examined by my associate, Dr. John Edwin Rhodes, who pronounced it empyema. He introduced a hypodermic needle in the region indicated just below the angle of the right scapula, and withdrew a small quantity of pus, and sent the patient to me for operation. When the boy came to me I could easily see the point of puncture that had been made with the hypodermic needle. Having Dr. Rhodes' letter before me, without careful examination, I introduced the aspirator needle at the same point and withdrew about twelve ounces of pus. The boy was sent to his home, a few miles distant, and a few days later I saw him again in consultation with his former physician. At this time I explored the chest in two or three places about an inch from the former point of puncture, but was unable to find pus. I found also that the respiratory and vocal sounds were distinct over portions of the lung, above, below and laterally of the area of dullness. Finally, upon entering my needle at the site of the old puncture and passing it in about an inch and a half, I again found the abscess and withdrew ten or twelve ounces of bloody pus. At the first operation I supposed I had to deal with a circumscribed empyema, but after obtaining a more definite history of the boy's case from the physician who had him first in charge, and after my explorations and deep aspiration, I became convinced that it was an abscess of the lung following pneumonia. I left word with the doctor that in case the cavity refilled it should be again aspirated, but a recent letter from him informs me that the boy continues to improve and has gained twenty pounds in weight. The cough did not return and the abscess did not refill.

These last three cases all resulted from pneumonia, they were all deep seated and chronic in character. In each there were distinct signs of a collection of fluid and a preliminary diagnosis of empyema, but in every case the pus was so sharply circumscribed and deeply seated that I feel sure of the diagnosis, even though I did not use the microscope to detect elastic lung fiber. These last cases are of special interest in showing what may be accomplished by simple aspiration in chronic, deeply seated abscesses of simple inflammatory origin.

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DISCUSSION.

DR. MCARTHUR—In reviewing the literature of the subject I have been greatly surprised that men of such wide-spread experience and acuteness of observation as Trousseau or Chomel had in twenty-five years experience seen but two cases each of pulmonary abscess. It has been my fortune to see at least ten or a dozen, most of which have been operated upon. The large proportion of cases occurring subsequent to a pneumonia, is striking and worthy of emphasis. In these cases the consolidation instead of liquefying and being absorbed or expectorated, breaks down into pus, together with the pulmonary tissues involved. This frequently does so at the time when termination of the pneumonia should occur, but does not. A diagnosis of pulmonary abscess being made (and in addition to the physical and microscopic examination we might recall with advantage the fact that the pus being expectorated from a

pulmonary abscess if shaken up with water will separate, on standing, into three layers; the *upper* mucous, *middle* water, *lower* pus, as in purulent urine), I believe the general plan a good one to empty them surgically; though Dr. Ingals has had such good results by the conservative treatment in selected cases. Dr. Fenger has emphasized: 1, the point that if we desire to determine the presence or absence of adhesions, that this can best be done by inserting a hypodermic needle deeply, when if the surface of the lung be not adherent the needle will move with each respiration; 2, that thickened, diseased lung tissues bear surgical interferences very well, and do *not retract* as do the healthy lungs. In the absence of adhesions in the lower portion of the pleural cavity (three hepatic abscess cases) I have been able to protect the pleura against a septic pleurisy by simply packing off with iodoform gauze strips the small area necessary for perforation of the diaphragm, and since in this situation it was possible in one very putrid echinococcus cyst. I have no doubt the same means might be employed to advantage in pulmonary abscess without adhesions, thus obviating the extremely difficult though sometimes successful suture of parietal and pulmonary peuræ.

Dr. Frank Billings—I agree fully with Drs. Ingals and McArthur, that the most common cause of abscess of the lung is croupous pneumonia. Of the cases I have seen, pneumonia preceded the abscess in all but three. In one case, an ordinary copper cent lodged in the right bronchus and caused abscess of the lung near the foreign body. A postmortem revealed the abscess and the cause. In two cases, stricture of the esophagus was the cause; in both carcinoma of the esophagus near the cardia, with consequent dilatation and perforation of the esophagus above the stricture, allowed infection of the tissues and abscess of the lung. Postmortem examination was made in these cases also. In one cases of chronic abscess of the right lung which was successfully operated upon at Mercy Hospital there was a history of pneumonia, which occurred two years before. Cough continued after the pneumonia, with the expectoration of decomposing pus. The abscess cavity was reached by resection of a piece of rib just below the scapula, and after a needle exploration, by cutting through the lung and pleural adhesions, the operation was made simple. Thorough drainage resulted in a cure. This case returned to the hospital a month ago, more than a year after the operation, suffering with cerebral syphilis. A full history of syphilitic infection several years before the occurrence of the pneumonia was obtained. It is therefore possible that syphilis had some causative relation to the abscess of the lung in this case. In my experience, abscess of the lung following pneumonia, occurs most often in the lower lobes, contrary to what the books state. In abscess following pneumonia the crisis may occur and the temperature fall to normal. If the temperature falls it will rise again in what seems a prolonged convalescence. Hectic usually occurs. The physical signs of consolidation of a part of the lung remain with, however, as a rule, diminished respiratory sounds. I think it is not possible to make a positive diagnosis until the presence of pus is shown by aspiration or by spontaneous rupture of the abscess into a bronchus or other outlet. The differentiation of circumscribed or encysted empyema from abscess of lung would be difficult without the discovery of lung tissue in the pus aspirated or discharged. From an empyema involving the whole pleural cavity, the usual signs of fluid in a pleural cavity and especially the displacement, by pressure, of neighboring organs would make a diagnosis easy. The diagnosis, therefore, in abscess of lung must depend, I think, upon the visible presence of pus, usually containing formed elements from the lung. The clinical history and physical signs furnish rational or presumptive evidence only. The treatment resolves itself into palliative, expectant medical treatment and curative surgical measures. If in an acute case, the patient is anemic and emaciated as a result of pneumonia or other causative disease, operative interference should be postponed until the patient may be strengthened by restorative iron and other tonics, good food, etc. One may cause a cavity to drain by placing the patient in a position to allow the pus to run into a communicating bronchus. I have had patients hung, head downward, over the bed for a few minutes at a time, a few times a day, or in certain cases a recumbent posture, on one side, or the back or face, for a time. A cavity may be so drained that recovery will take place without surgical interference. In acute cases, when drainage by posture can not be obtained, and in all chronic abscesses, chronic because drainage has not been good, surgical interference is indicated.

Dr. Shurly—It is often exceedingly difficult to make out abscesses of the lung when deeply seated. This seems to be one of the things over which we fail. A great many of these cases presenting obscure physical signs are abscess of the lung following pleuro-pneumonia. Some of them, however, present so little constitutional disturbance that we are apt to let nature alone. Others present such constitutional symptoms that our attention and aid are required at once. I have had three cases in which inflammation of the brain came on after the development of abscess in the lung and chest. I might have saved these patients perhaps if I had operated early. Even in cases of ordinary empyema it is not uncommon, whether they have been operated upon or not, for an attack of meningitis to follow, the exact cause of which we are unable to determine even under our modern doctrines. I think many cases where only the pleura seems to be involved are really cases of abscess of the lung thus presenting the most complex features to us, and requiring the most careful treatment. If the contents of the cavity be so imprisoned by fibrous walls that there be little absorption we may have little or no temperature or other constitutional disturbance; but if these barriers break away a sudden infection of surrounding pulmonary tissues takes place and we have septicemia, which may end life in a few days. Some of the most virulent cases of septicemia follow upon abscess of the lung. Sometimes making an openieg will not avert it; for in the cases I opened, the abscess of the lung all died of septicemia. It was probably because I opened two inches of lung to reach the abscess. I am not surprised at the result, for I thus exposed a field of capillaries and lymph spaces such as does not exist anywhere else in the body outside of the generative organs. It is a wonder that one does not observe septicemia in every case. I have thus been warned from sad experience to refrain from cutting into lung abscesses which are deep seated, unless I can see some sign of invasion of some other part of the body, and if the cases seem to be improving ever so little I content myself with waiting. I have two cases on hand now which are recovering slowly of abscess of the lung, in which I did not feel warranted in attempting any operation. We should be extremely cautious if we can not positively distinguish the location of the abscess. A few years ago I had a case of abscess of the lung, following croupous pneumonia, sent to me for operation. The man was in a very low condition, his temperature fluctuating between 105 and 97 degrees. I thought the operation must be done at once and advised the man accordingly, but a brother telegraphed requesting that nothing should be done until his arrival. As he persistently refused to have it done we were forced to wait and when the brother came the man was somewhat better. Later in consultation with his physicians we concluded that we would be justified in continued waiting, and the result was that the man finally recoved without an operation. If I had operated he might have died.

Dr. Samson—I have had the opportunity within the last twenty-four hours of seeing one of the most interesting cases of abscess of the lung in existence at the present time. The

patient six years ago swallowed a boring of maple. He began to suffer in health and was sent to Denver and other health resorts. Specialists tried to reach the abscess by passing a trocar in some distance below the scapula. They did not find any pus. Just now the case is a typical one of abscess of the lung, coughing up fully a pint of pus every day. Very much can be done in a surgical way for the relief of this trouble, and I believe we should operate in all cases where we are able to make a correct diagnosis.

DR. FLINTERMAN—I would like to inquire of author if where there was a pulmonary abscess was there not sometimes a pleuritic effusion in the pleural cavity?

DR. INGALS—I have not seen the condition referred to by the last speaker. I was much interested in the statement made by Dr. Shurly, that inflammation of the brain was a common occurrence with abscess of the lung. Dr. Shurly's experience seems to correspond with my impression, viz., that as a rule the earlier we operate the sooner the funeral. The early evacuation of a pulmonary abscess does not seem to me as safe as tentative treatment, at least for a few weeks.

PURE WATER.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY FRANK W. EPLEY, M.D.

NEW RICHMOND, WIS.

In the beginning God created the Heavens and the Earth, and he filled the Earth with pure water and surrounded it with pure air.

Then he made man and put him on the earth. And for a time he also was pure. Then he began to be restless and to invent. He has sought out many inventions.

The Allwise Creator provided means whereby all filth should be purified and resolved into its ultimate elements. Man has sought out many cunning devices for defeating God's plan of purification. The most potent purifying agents are heat, light and air. The most potent factors in the development of poisonous germs and gases are warmth, moisture and darkness. The offal of all living things except man is deposited upon the *surface* of the earth. The bird deposits his while flying through the air; the ox and horse upon the dry grass, or in the dry dust. The dog is wont to place his upon the top of a stump or stone, and all are left in the best possible condition for the action of nature's disintegrating elements heat, light, air, etc. Man alone, whom God made upright and in the image of Himself, has invented a *hole*. Two holes in the earth; nearly always close together, at least relatively, so that both shall be convenient. One he makes comparatively shallow but deep enough to accommodate himself and family for many years. In this he deposits his offal both liquid and solid and says, "Soul take thine ease," in this hole thou shalt lay up much goods for many years, "eat, drink and be merry," and if thou hast any other unclean thing which offends thy sight or smell, cast that also into this *hole* and it shall sink away into the earth out of our sight. Even so the rain falls upon the surface of the earth and sinks away out of sight, finding its way into the other hole which man has invented, and from this he supplies his family with pure (?) water.

If he, this Lord of creation, lives in a modern city which is embellished with all the improvements of our advanced civilization (?) he has a much handier method. He has a bottomless bowl, or one having one side wanting and with a small quantity of water in the bottom into which his offal is deposited and which is washed away by a dash of water; *most* of it, out of his sight and into a tube which leads down into a subterranean passage, this passage communicating with a like tube from his neighbor's bath room and receiving the contents of tubes leading to thousands of other bath rooms until the filth of the whole city is coursing through it and is finally deposited into a pond of pure (?) water just without the city; or what is more likely, within the city.

I said *most* of the offal was washed off the smooth polished surface of the bowl in his bath room; some small quantity, however, frequently requires a vigorous rub to be displaced. When it reaches the inner surface of the tube below, it does not get this vigorous rub and remains stuck to the sides until the whole tube is, many times, full. From this a gas is found to arise finding its way in six out of ten cases directly into the living apartments, and when it has any odor, is very frequently termed the "smell of aristocracy." But pardon this digression, we were to speak of pure (?) water. However, we were very close to it when we left the end of the tube leading down from the bath rooms into the pond. We have now only to go a short distance further out into this pond to obtain an abundance of pure (?) water. Then we lay another tube along side of the first one, which leads up to the kitchen faucet. Will any one attempt to give us the chemic formula for the water obtained from this faucet? It is H_2 offal. contemplation. Can we reasonably expect to obtain pure water to drink from our abundant natural resources when we resort to such civilized (?), shall we say such outrageous, systematic methods of wholesale pollution. Can we while we do this lay any reasonable claims to rationality? I say "no."

Gentlemen of the AMERICAN MEDICAL ASSOCIATION: We are the logical keepers of the public health. We all know these two systems of disposal of filth are abominable. Shall we sit quietly down, fold our white clean hands, and say, this is too dirty a subject to handle? They are wrong, but they are old established customs and it is too great a task to undertake such a revolution. For shame! There is no task too great for Saxons to undertake.

There is no wrong, however grievous, too great for Americans to try at least to rectify.

The *death knell* of our American vault and sewage systems should be sounded, and it is incumbent upon *this* ASSOCIATION to hurl the fatal shaft.

DISCUSSION.

DR. HIBBERD—I desire only to call attention to the inference that I think might be drawn from the verbiage of the paper—that man made all that is bad on the earth in spite of the Beneficent Providence, which created it pure and good in the early arrangement of the universe. All I want to say is, so far as my knowledge concerns, everything of the kind takes place in the world as precisely according to the laws of the Creator, as though they were made in the beginning; therefore, man did not invent them, and if they are not salutary in their effect, it is simply because there is a lack of observation of what is good, as the Creator intended. I think God is good, and that He has made the world good. I think the laws by which we grow, and progress are all good, and if we fail in recognizing what we should do to maintain the operation of these laws in a sanitary direction it is a failure, but not on the part of the Creator. All I want to do is to raise the idea that God is Supreme and has made everything good primarily; and that if we do not obey

His laws and receive the benefits which He intended us to derive, then we are at fault and should not throw the blame on Him.

Dr. McIntyre—Of course we can not all see the value of the paper and appreciate the ideas brought forth therein regarding pure water; and while there may be mistakes contained in it I will simply speak on the line suggested by the author, rather than suggest any corrections. It seems hard to suggest anything that will take the place of our present sewage system, or exactly meet the requirements; but will the correction of the evil be found in purification? I think that is being done. I think the demands of modern civilization require two things: First, thorough purification of sewage before it contaminates the streams and lakes, and secondly, thorough purification of the water itself before it is pumped into the mains to be distributed into the city. The manner in which this is done at Lawrence, Mass., has demonstrated that as the solution of the difficulty. The experiments tried in the last cholera epidemic at Hamburg show the difference between filtered and unfiltered water. These experiments all show that this can be done and at the same time that the sewage of the city can be cared for in the convenient manner in which it is generally disposed of. And then, by proper ventilation, there is no odor in the house, and the water in the house is kept clean.

Dr. Jerome Cochran, Montgomery, Ala.—Having something to do with practical sanitation, I am naturally interested in it. Filth, doubtless, is a very undesirable thing to have about a place, and it is especially undesirable to have it in the water supply; but I would like to emphasize that there is a great deal of filth that is offensive to the senses that is not detrimental to health. I would insist that that filth which is detrimental is a sort that is not offensive to the sight or taste. The things which produce diseases in water supplies are bacteria. We have disclosed the filth so far without reference to its organism. The fecal matter in itself, when it is not filled with the bacilli of typhoid fever, is perfectly innocuous to health. I think the remedy is to purify the sewage before it enters the waters, and purify the water after it is taken away from the lakes; fortunately for us nature has shown us how to purify water. The great method of purification is by filtration. That is the way nature purifies water, but there are practical difficulties in the way of getting rid of those pyogenic organisms that do not seem to have attracted the attention of sanitarians. The city of Lawrence, Mass., has made a study of the filtration of water, but you find that all the bacteria are not eliminated in that way nor all the organic matter. It is this matter going to any water—these pyogenic bacteria already taken out of it that will soon multiply again. You can not thoroughly purify by filtration. It is in a very much better condition than before so that if you want to get water that is practically free from bacteria there is only one way, and that is to re-filter it.

Dr. Epley—I only hinted at the subject to call attention to the disposition of filth and the obtaining of what is termed "pure water."

We have all of us recognized the difficulty in the disposition of human offal. As I said, man has invented a hole, and for that reason I have for many years been endeavoring to create a disposition among people where they have no sewerage to dispose of offal in a dry condition. But they say "I have dug a vault, and it will last me a great many years. I shall never have any more trouble." I have for years advocated the keeping the human offal dry and letting the water fall off on the top of the ground. It is very easy to do that when a system of closets are used. I have seen them used for eighteen years without any trouble at all. I have encouraged their use in the community where I live, where they had no sewerage. In fact I have encouraged it where they have sewerage. The sewerage system has many faults, and it must sometime be corrected. We have no right as intelligent beings to deposit our offal in all conditions, whether benign in its character or filled with diseased germs, into running water, our pure sources of running water that we must have for our sustenance. So far as the purification of water before it reaches our streams is concerned, I am not conversant with any system which promises anything substantial or reliable in this line that can purify water that is one-third or one-fourth or 10 per cent., or 5 per cent. fecal matter, while it is still in the sewer and before it reaches the water course. It seems to me to be an impracticable plan. I do not understand how it can be done.

Dr. McIntyre—It is done by filtration at sewage farms, by the use of the lime and iron process.

Dr. Epley—It is purified, but at what expense? The disposition of it as a fertilizer is right, and should be used, but at the same time it is truly impracticable to attempt to dispose of offal in the current of water and have so much more to destroy; it is much harder to destroy a quantity of water that is one-half or a very large percentage solid matter, than it is to have the solid matter and the water separate. But this process would not exclude sewer gas; and if I understand the gentleman who spoke of sewer gas correctly, he said proper ventilation would prevent it from entering the house. I was investigating this matter in Milwaukee a few days ago, and I asked an inspector, who was testing for sewer gas (and his test responded beautifully, in a large percentage of houses in Milwaukee, a well ventilated and well sewered city) what percentage of houses would respond to that test, and he said nine out of ten. The gas was entirely without smell, but it was deletrious in its effect upon the inmates of the household.

The method of filtration is satisfactory, if it is executed as it should be; but what I state is that to keep the solid matter separate from the liquid matter is much easier and can be done with much less expense than purifying the whole mass after it has become thoroughly mixed.

Dr. Kober—I would like to ask how he considers it feasible in a large city. The plan he speaks of is very applicable to small communities and is, perhaps, the best method of disposition; but the dry earth system is scarcely applicable to a town of over twenty-five thousand inhabitants. Indeed, it has been considered quite expensive in every way, and if he has any data on the subject I would be glad to hear it read.

Dr. Epley—I have not a thoroughly matured plan, indeed, I do not profess to be an inventor or civil engineer; but I believe that it is an evil to which our inventors and civil engineers should turn their attention, and I have no doubt but that a system can be provided whereby this solid matter can be kept from the lake by a system of dry closets, or keeping the offal dry in some way.

Dr. McIntyre—I think, in parts of Birmingham and Glasgow there is no sewage system. There are places where the pail system prevails. My impression is that the cost per capita of removing the pails in this way is larger than the system of purification. It is in small towns where it has been used on a small scale.

Dr. Epley—You have not disposed of the sewer gas.

Dr. McIntyre—I refer you to the report of the committee appointed by the London Commissioners of General Works on the air of sewers, where it is shown that the air of the sewer is better than the outside air.

New Jersey County Hospital Law Amendment.—The law passed in New Jersey in 1886, entitled "An act to enable counties which have no free county hospital to assist in maintaining hospitals located in such county," was amended in May, 1896, making it lawful for the board of chosen freeholders of any such county to make an appropriation therefor of a sum not exceeding $8,000 a year, instead of $1,000 as heretofore, and providing that the act shall not apply to counties of the first class.

EVIL RESULTS OF OVERSTUDY IN THE YOUNG.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta, Ga., May 5-8, 1896.

BY W. THORNTON PARKER, M.D.

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In the early days of our Republic, it was the unwritten law that the youth must work first, and study afterward.

The children of the wealthy could be sent to school or college, but for the average American book learning formed a small part of life.

The picture of Abraham Lincoln lying on his stomach, in front of the open fire, with a piece of charcoal ciphering on a broad wooden shovel, represents the man who afterward became President of the United States. This is not an extraordinary picture in early American life. Garfield, as well as hundreds of other prominent men, won his education by a struggle. And up to the present moment, there are countless young men throughout our country who are earning their way through college, just as there are many other young men who are squandering their way through. These two classes suffer from the evil effects of overstudy; the former being obliged to work with the mind when the body is weary, the latter recklessly wasting time in pleasure and dissipation, struggle in the process of cramming to make up for lost time in order that they may retain their class membership.

The American public school has been the pride and glory of American institutions, not because the standard of learning is any higher, but because it represents liberty, equality, fraternity. In this nation of ours, the humblest can, if he will, acquire a good education. We are inclined as a nation to have a rather exalted opinion of ourselves in everyway. Our waterfalls are the biggest, and everything else is in noticeable proportion. The recent rumors of war illustrate the fact that we are becoming rather reckless. The victory of the American athletes in the recent Olympian games, is likely to create a popular idea that our students are the strongest in the world, and that our educational system is therefore all right.

A recent paper by T. S. Waters, D.D.S., in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, concerning "The Public School, and its Defects in Relation to Health," is particularly instructive in this connection. The writer being a dentist emphasizes the fact that inferior teeth demonstrate the existence of abnormal constitutional conditions. He says: "School crowding and cramming impairs the health and lessens the appetite, which causes imperfect nutrition, bad assimilation of food and of ideas. This therefore lessens appropriations of good amounts of food which should consist of a proper amount of phosphates, with lime salts for the growing child, the very want of which retards and impairs the development of the second growth of teeth, of hair, nails and bones." This is the sum and substance of the matter in a nutshell. The overtaxed student immediately suffers from physical as well as mental harm. We often hear it said that some young cripple possesses an extraordinary amount of brain to compensate for the weakness of body. I believe that physiologists are quite agreed that during our sleeping hours there is less blood in the brain than during our waking moments. It is unreasonable to suppose that because a man's circulatory fluid is diminished in quantity, he will be able to compete mentally with a man whose mental and physical vigor is as near normal as possible. But it is reasonable to suppose that the student who is mentally and physically overworked, and who does not receive suitable nourishment, who is deprived of needed rest and sleep, and whose circulatory fluid is below par, is not in a fit condition for physical or mental work. He is unable to stand the pressure. Unusual mental activity is apt to result in speedy bodily derangement amounting to more or less serious illness. The illness may be so profound that the nervous system is permanently disabled, and this injury may range all the way from simple nervousness to hopeless insanity.

I will quote from a paper which I have published in the March number of the *Dietetic and Hygienic Gazette:* "The nervous strain laid upon our young students is inexcusably wrong. Generally speaking they are too young to understand the full meaning of the condition which this youthful rush, miscalled energy, inflicts upon them. Later on in adult life, if they survive the terrible strain, they recognize the injury they have sustained when it is practically too late to undo the harm which has resulted. The strain of study and the effort to acquire a high standing in the class is encouraged by the teachers and directors. The tension of modern schooling must necessarily create nervous disorders, of which heart disease is one of the most easily recognized manifestations. The trouble is present in the rudimentary errors of modern life, which we can see all about us, and which to the onlooker appear very much like morbid restlessness. The loads we place upon the shoulders of our children should shame us. We would never place physical loads in proportion to the mental burdens we force them to assume, because if we did public justice would cry out against us. The physical burdens are not so injurious or far reaching in harmful influence as the mental strain. Our children go to school and labor mentally to please us, as well as to gratify their own ambition. We stand by and witness this outrage on our own flesh and blood without making any active effort to save them."

It is not intended that these remarks shall apply to our young men only; unfortunately the outlook for our young women in this respect is even more serious.

Dr. Waters, and other writers, have called attention to the nervous injuries which overstudy inflicts upon our girls. "Neurasthenia saps the nervous energy that should be devoted toward fitting her for motherhood within the next few years, when her greatest development in mind and body should be perfected. Hysteria is the most prolific source of domestic infelicity."

The new woman craze endeavors to teach the daughters of Eve that they can study as well as men, and can accomplish as much if they endeavor to do so. There is a partial confession that, although physically inferior in strength and not suited for war, agriculture, or mining, in every other respect they are man's equal, and it is essential that the girl of thirteen should go to school with the boy of the same age and continue her studies by his side. The fact that she is about to ripen into young womanhood, that every twenty-eight days she should menstruate regularly, seems to suggest no mitigation of the amount of toil which is placed upon her. She bravely attends to

household duties at home, hurries off to school whether head or back aches or whether she should be in bed, and tries to keep up in the unequal contest with the boys. That she appears to win and graduates with higher honors, gives us little idea of what the struggle has cost her, and of what the sum and substance of the struggles of all these girls will cost our nation later on. These little misses ought to be at home learning from their mothers, if their mothers know enough to teach them, lessons in domesticity. The noble women who had so much to do in shaping the fortunes of this Republic in its early days would be disappointed in their descendants, in spite of the incongruous cap and gown, of this fin-de-siecle age.

This interesting, artificial young creature so unlike the women of a century ago, abnormal in her bodily functions and very much given to neurasthenia and hysteria, intends to marry some day; but many of them do not intend to have children if they can prevent it, and if they survive the birth of one child, it is doubtful if they could properly nourish it. When a little school girl, clothing was given her irrationally made; it mattered not if it pressed on the breasts and retarded their growth, or if its pressure on the pelvic organs pushed them out of their natural position until pelvic disease was almost a certainty. The object of her existence seemed to be that she hold her own with the boys of her age; that would be her glory! The fact that such artificial women are likely to know something of divorce laws later on makes no difference, she must be educated no matter what happens. The result of all this is most excellently shown in an editorial in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION of April 25. "The Despised Office of Motherhood.".

The fault therefore in American student life is to be charged to the educators and to the parents of children, rather than to the youths themselves. In an article published in the December number of the *Dietetic and Hygienic Gazette:* "Most parents think that the studies of their sons and daughters at high school are altogether too numerous and too severe. We are apt to suppose that it is the particular high school to which our young people go that is at fault; but a little inquiry shows that our neighboring academies are just as bad, or even worse, in this respect. Who are to blame for this? Certainly not the parents? The teachers disclaim the responsibility, and many of them even regret it. Therefore in our municipality at least, we are forced to conclude that it must be either the supervisors or else that august body of irresponsible, tyrannical solons called the *school committee.* We desire no worse punishment for such supervisors and committees than that they should be obliged to swallow the mental food which they have prescribed for the young people. This would give them a mental dyspepsia for the remainder of their days that would surely keep them from doing any more harm of this kind."

Dr. Dujardin-Beaumetz has also called attention to these evil effects of overstudy. He says: "These students are badly developed, pale blooded, exhibiting an excitability of the nervous system which results from mental overwork depriving them of sleep." Insufficient sleep is one of the most noticeable evils of modern civilization; the nervous system, as well as the brain, suffers severely from this want of sleep. Both mind and body are seriously and oftentimes permanently injured. Mental exhaustion, irritability, and brain fag are the result, the sleeplessness causing neurasthenia. So many of our students are ignorant concerning the requirements of health, or if not ignorant, are forced to continue their studies far into the night, reserving only four or five hours for sleep when they should have eight or nine. These hours of repose should be passed in rooms where the best sanitary conditions obtain, and this is what almost never happens. One of the most frequent causes of heart disease, is the want of proper rest. There are many influences provocative of heart disease in the young, which we can readily understand if we give the matter attention.

With the bars of our ancient puritanic austerity thrown down, in an age of the sharpest competition, and when great things are expected in every department of life, it is no wonder that the sands are strewn with many a noble wreck. In the rush of student life, the meals are eaten with too much haste, the quality is apt to be inferior, mastication improperly performed, and indigestion the invariable result. These diseases of the nervous system, of the heart and the digestive apparatus, are the exciting cause of melancholia. Our daily papers chronicle from time to time the extraordinary suicides of our youths. This fact alone should call for a radical reform in our educational system.

A very grave responsibility rests upon the managers of our institutions of learning. They desire to satisfy the public as to their faithfulness; the public demands that these educators shall exhibit a good showing for the large sums of money invested; and all this great burden rests at last upon the shoulders of our children. The manly vigor of the Republic is robbed of its strength for the sake of creating an artificial condition which does not contain the elements of future national prosperity.

THE PREVENTION OF INFECTIOUS DISEASES.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY J. M. G. CARTER, M.D., Sc.D., PH.D.

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WAUKEGAN, ILL.

Perhaps no branch of medicine occupies so much of the thought of the medical profession to-day as infectious diseases. The manner of dealing with these has undergone great changes during the last few years.

The treatment is more satisfactory, and the prophylactic and preventive phases of treatment are most prominent. Since Jenner discovered the importance of vaccination as a preventive measure against smallpox the belief has prevailed in many minds, and hope in all, that some means might be discovered to reduce the terrors if not prevent the prevalence of all the diseases commonly known as infectious. Under improved hygienic precautions and more scientific methods of treatment this hope is beginning to be realized. Typhoid and malarial fevers are almost conquered, the specters of tuberculosis and diphtheria are beginning to pale and show evidences of vanishing, the terrible cases of scarlet fever are not so frequent, measles *et al.* are not so frightful.

The object of this paper is to offer some sugges-

tions upon certain points in this field of medicine, but a full discussion can not be undertaken in the brief time allowed to this subject.

The most successful methods in bringing about these results in the past are the means which should be pushed under wise supervision in the future until they assist us in conquering all these diseases or discover better methods which will help us to attain this end. The principles upon which these methods as practiced at present are based may be given as: 1. Systematic cleanliness. 2. Prevention of individual contact. 3. Fortifying the system against an invasion of the disease.

1. Systematic cleanliness is of the utmost importance and includes the whole field of asepsis and antisepsis, a subject which can nat be discussed in this paper.

2. The prevention of individual contact with persons who have an infectious disease, or who have been exposed to one, has been attempted ever since the infectious and contagious nature of certain affections was discovered. These attempts have been conducted in various ways, however, and frequently with very meager knowledge of what is required to make them efficacious.

Without stopping to explain the terms infectious and contagion I will observe that the only difference between them is one of degree, not of kind; that all bacterial diseases are conveyed from one person to another chiefly through the medium of the atmosphere, or water and other liquids; that those cases occurring from the immediate application of the poison, as in instances where particles of diphtheritic membrane have been coughed into the mouth or eyes of attendants, or scarlet fever has been carried by fomites, are not exceptions to this statement. The virulency of the poison depends upon its degree of attenuation. A few of the bacteria which produce a given disease may not infect a person while an invasion by a large number may be irresistible. The atmosphere and water (liquids) while serving as media for the conveyance of these disease germs, at the same time cause an attenuation of the poison by dilution. There is a difference in resisting force to this dilution manifested by different bacteria which helps some to remain concentrated while others are rapidly separated. This enables us to explain the well-known fact that whooping-cough, diphtheria, measles, etc., are conveyed only by an immediate or almost an immediate contact usually; as soon as the germs reach the atmosphere they are in most instances widely and rapidly diffused, concentration is quickly overcome, and their virulence soon destroyed. The bacteria of scarlet fever and typhoid are more resistant to diffusion, perhaps their poison is more malignant or possibly they are more tenacious of life; hence these bacteria may be conveyed through air or water (liquids) to a greater distance. Still other diseases, like influenza and cholera, are caused by bacilli which are not so much affected by separation in the atmosphere, in fact frequently seem to have greater opportunities for growth by such diffusion under certain favorable conditions of moisture and temperature. In all these cases, however, sufficient attenuation of the poison by atmospheric dilution will destroy the virulency of the bacteria and put an end to the spread of the disease. This principle is the basis of judicious efforts at isolation, segregation and quarantine; but it will also convince us that these means alone may prove futile in many instances.

It is well known that bacteria inhabit the soil in large numbers, non-pathogenic in the superficial and pathogenic in the lower layers. More air is found in the superficial than in the lower layers; so that the principle of atmospheric attenuation seems to apply here also. Water which filters through the soil and enters a well may poison the water with pathogenic bacteria. In like manner ground water which enters a cellar may fill the space with the germs of some infectious disease. It is to the latter point that I desire to direct especial attention. In order to avoid some of the dangers and prevent the occurrence of infectious diseases in houses otherwise in good hygienic condition it is necessary to have good ventilation of the cellar or basement. Where this precaution is not taken even in homes otherwise above reproach, frequently ravaging outbreaks of measles, scarlatina, diphtheria and the like are held to be mysterious dealings of an inscrutable Providence, when it is but the misdoings or shortcomings of unwise men, and one of the least mysterious matters in preventive medicine. If such disastrous results may be experienced in houses of the well-to-do and of the rich, what shall we say of those farm, village and city houses of the poor where, to keep out the cold, the entire foundation is banked with dirt or manure, thus preventing any access of fresh air under the floor during a long winter? The effect of such exclusion of the air is to make a favorable culture medium for the bacteria of diphtheria and scarlatina, and it is the experience of many practitioners that their most frightful cases are met under such circumstances. Architects and officials should direct especial attention to this matter and prevent the erection of buildings which can not be easily and thoroughly ventilated from cellar to garret.

3. Fortifying the system against the invasion of these diseases is a legitimate undertaking and although some of the methods which have been adopted may be of doubtful efficacy, every earnest effort in this line should be encouraged. Vaccination and inoculation have been resorted to with such satisfactory results that in smallpox and hydrophobia they may be said to have passed beyond the stage of discussion. Serum therapy has promised brilliant results and the most hopeful have great confidence in this new form of attempting to strengthen the cells of the body to enable them to destroy, or at least resist, the evil influences of pathogenic bacteria.

The condition of immunity which is said to be established by these antitoxins is subject to variations in the time limit, and in some instances the influence seems to be negative. A friend and neighboring practitioner who had immunized many cases told me lately that of the cases in which he had given the injections of Behring's serum for immunizing purposes some of the patients had suffered from diphtheria in three or four days after exposure to the disease and the administration of the immunizing agent. The time limit of immunity varies after vaccination also, but the virus has a more prolonged effect than the serum upon the human system. It must be remembered, however, that the serum treatment is scarcely fully understood yet, while the value of vaccination has been firmly established. We may ardently hope that this new method may lead to discoveries of means which will enable us to rescue humanity from the blight of infectious diseases. While we are waiting for the realization of this hope

many will still prescribe belladonna to prevent scarlet fever and iron to ward off diphtheria; but I wish to emphasize what I consider a more rational process, particularly with diphtheria, typhoid fever and other exhausting diseases. It is known as a physiologic fact that certain fluids of the body, as blood, serum and the gastric juice, when in a normal condition are germicides. They kill bacteria. For our present purpose it does not matter how they accomplish this result. Such being the case, whatever helps to keep these fluids in a healthy condition will serve to fortify the system against the bacterial or infectious diseases. In view of the fact that the human body has the power within itself to battle with these enemies it may be suggested that most if not all cases of infectious diseases are results of neglect of some hygienic law or of the transgression of some other. The individual should not reduce his vitality or derange his digestion by eating too much or too little, or by submitting to fear or excitement, or any other condition which will diminish the normal resisting power. He should not permit work, pleasure nor social relations to interfere with his physical well being. He should be well clothed as well as properly fed and comfortably housed. This opens up a question which is too broad for just consideration in this paper, a social and political question. It is our duty, however, to call sufficient attention to this phase of our subject to make it a matter of thought. It is a cardinal fact that infectious diseases are prone to prey upon if not to originate among the poorer classes of society. To avoid this occurrence, to prevent these diseases from arising thus, requires that the poor should be well housed, well clothed, well fed, well bathed and properly exercised. How is this to be done? I do not discuss the method, I only desire to suggest whose duty it is to remove the condition. The poor can not do it. No man so thoroughly realizes as the physician that he is to a degree his brother's keeper. If a man has no right to do anything which may bring disaster to his neighbor, he has no right to go dirty, to live slovenly, to breed disease. If children are unable to accomplish results, to perform duties, which the rights of men lay upon them, the father's duty to aid them is paramount. We, and the poor with us, are but children of the State. The question then remains with us, how shall we as physicians, humanitarians, socialists, politicians, statesmen, provide the unfortunate with proper food, proper clothing, comfortable houses, opportunities for bathing and sufficient work to help them keep the grim monster from threatening our doors by invading the homes of the poor in the form of an infectious disease? Until something can be done in this direction, infectious diseases will still dwell in our land, although improved prophylactic or preventive agents may reduce their mortality.

Believing that the plan of supporting the ultimate tissues of the body by general hygienic procedures and proper feeding is the best means given to us for preventing the group of infectious diseases, it may be admitted that some good may be accomplished by the administration of certain drugs. If belladonna is of any value as a preventive of scarlet fever, it must be so because it has some modifying effect upon the cells of the body, not because it produces a rash. So far as I am aware no experiments have determined this point. Still I use this remedy for the purpose here suggested and in many instances have thought it seemed to have some virtues as a preventive. The use of iron to prevent diphtheria is in direct accord with the ideas advanced in this paper, and without doubt serves an excellent purpose. Hydralactin, protonuclein and other proprietary preparations like the antitoxins have not enough reliable evidence in their favor to make their use as preventives general, but we are encouraged to hope that further reports and improved methods of production and administration will justify the high expectations which have been excited by the introduction of these agents, especially the antitoxins. A remarkable claim has lately been made for a specific action for jaborandi or its alkaloid, pilocarpin, upon the white blood cells. It is said to increase their phagocytic power or function. If this should be confirmed pilocarpin will be of great value in the treatment, as well as in the prevention, of all bacterial diseases. In two cases of tuberculosis in the earlier stages I have observed a favorable modification of the symptoms when administering this remedy and in several cases of chronic bronchitis the improvement has been marked. I shall conclude this paper with the following résumé:

1. Systematic cleanliness should be practiced, (a) by thorough disinfection of the patient, the sick room, all instruments, vessels, and other apparatus or clothing in use; (b) by allowing no unclean or infected fabric or vessel to be taken from the room until rendered aseptic.

2. Prevent individual contact (a) by isolation, segregation or quarantine; (b) by prohibiting communication between the infected and uninfected except under strict surveillance of the physician or in accordance with his explicit directions.

3. Provide thorough and systematic ventilation of cellars and basements as well as all other rooms in houses used for dwellings, and give free access of air under floors of houses which have no cellars or basements, and supply complete drainage.

4. Fortify the system against pathogenic bacteria (a) by abundant and suitable nourishment; (b) by insisting upon the observance of the laws of hygiene relating to clothing, eating, exercise and bathing; (c) by the administration of certain drugs, among which belladonna, iron and pilocarpine are prominent; (d) by the conservative use of vaccination, inoculation, the serums or antitoxins and perhaps protonuclein.

5. The State or city should see that the poor have work, food, clothing, good shelter, public baths and fresh air.

6. Health inspection officers should keep their wards in good sanitary condition, and see that the water and food supplies are uncontaminated.

PHYSICIANS AS PAUPERIZING AGENTS.

Read in the Section on State Medicine at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY DOUGLAS H. STEWART, M.D.

NEW YORK.

The writer has no desire to indorse any doctrine of socialism, communism or the like, but he wishes to call attention to two axioms which, though trite in themselves, are ever new in their application and abuses: 1, capital requires labor; 2, competition compels capital to lower wages. Without labor, capital may neither be accumulated nor maintained. Any sum of money must be dissipated eventually unless it brings interest, and interest, directly or indi-

rectly, means the earnings of hand workers. The fundamental laws of progress, and of animal life itself, seem to begin at toil with the hand or its substitute. Thus we see large communities of brainless beings, and the descending scale brings us to the jelly-fish which presents only a stomach and tentacles—a perfect type of absorption and acoumulation. The brain may be essential to civilization, but without the hand existence would be impossible.

Lower wages may be obtained by reduction, regardless of employes or their needs. Business is without sentiment, and this direct method has been tried and has called forth the denunciations of organized unions from Maine to Calfornia. United labor has become capable of such independence and reckless readiness in asserting real or fancied rights that capital is cautious of unnecessarily antagonizing it. Constant attempts at making the hire unworthy the laborer arouse feelings quite different from the plaintive protests of a few individual sufferers, and if persisted in could only end in a chaotic condition of society. The Government Reports for the last seven years show a total loss to the community from strikes of $64,000,000; fully 25 per cent. being due solely to attempted reduction of wages. Another method of decreasing compensation would be the importation of men under contract for a remuneration which may seem fair in Italy but, owing to the radical difference in the purchasing power of money, is starvation's limit here. Hordes of such immigrants would glut the market and force the American to compete with foreigners who can and do exist on food found in the garbage barrels. This danger was dissipated by labor's voting power and its effect on the legislative bodies. Laws were passed cutting off the contract-labor supply from too economical employers, and the capitalist is now between two fires—the stubborn resistance of labor and keen competition, with a possible removal of protective duties. From a business standpoint he can not be condemned for managing any industrial investment with the sole idea of "product as low and market as high" as circumstances will permit. Economical machinery has enabled one man to do the work of ten, and quality is made secondary to quantity. But despite all this, the element of expense in the cultivation, collection and conversion of raw material remains the price of labor.

The laborer will not adopt a cheaper mode of life without a protracted struggle; therefore, if his earnings are to be lessened, his living expenses must be cut down and his money made to go farther. The leading items of his disbursements are rent, clothing, food and professional services. Overcrowding will lower the value of rent and clothes, but labor is united on the plan of: "One for all, all for one," and the packed tenement and the "sweaters'" pittance press hardest on the poor toiler. This objection, backed by solid votes, has caused a law to be passed forbidding the "double-decker" house and the erection of any structure occupying more than 65 per cent. of the lot. The present "sweat-shop" investigation is presumably only preliminary to prohibitory legislation.

Food, mostly farm products, can go no lower. Many farmers are now abandoning the farms and seeking a livelihood in the city. Those who do remain in the country are organizing for protection from ruin.

Professional services are rendered by the lawyer, the clergyman and the physician. The lawyer may be called perhaps but once in a lifetime. He does no public charity work and all attempts at starting legal dispensaries have come to naught. He can be a help if employed or a hindrance if opposed. He is in command of the legal machinery from the White House to the "Tombs" prison. He and his professional brethren are so united in their interests that a malpractice suit against him must fail for lack of expert testimony. Capital can not reduce his fees, for he is a most dangerous adversary when attacked through the pocket.

The sums paid to church and clergy may be great or small, but an attempt to diminish them would cause such an upheaval as has not been since the Crusaders. The owners of wealth are growing old. The grave and the chances of a leveling process beyond make awkward thoughts for quiet hours. Capital sleeps lightly and if a millionaire is timid a multi-millionaire is often hysterical. Conscience does make cowards and the man of the cloth is let alone. He even receives "offerings" instead of fees, but he uses his influence for what he mistakenly believes is a good cause, and has collections in his church for charity falsely so called.

The doctor is an urgent necessity to the workingman. Exposure incident to toil, low vitality from lack of sunshine and from malaria and other diseases consequent upon meagre air space and indifferent plumbing—all these make the physician a frequent visitor upon the tenement families. The doctor's charity toward laymen is unlimited, but toward his colleagues he holds the simple faith of "Holy Willie" in Robert Burn's satire: "God bless me and damn my neighbors."

The farmer and the physician are ground very fine—but with this difference, the farmer is organizing but the physician is disorganizing. The workman does not yet realize that the cheapening process means lower wages later on. It is not sufficient to give the work people free medical attendance, but everyone must be furnished as well, so that the shopkeeper can decrease the pay of his employes, as the banker can his bookkeeper's salary. To lower the cost of living everybody but the very rich must become paupers—so far as the medical man is concerned.

What must we think of any citizen quietly submitting to such imposition and becoming part of a great wedge which is to split up the manhood and self-esteem of our whole community? Is any one willing to inculcate the doctrine of non-payment for value received? Is this not the very teaching most opposed to all political economy, and the plan of action which makes the counterfeiter the most dangerous foe to the Government? There is such a man. He comes to the city a student, advertised for and welcomed by the medical colleges. They extend promises, either real or implied, of a livelihood after his diploma is secured. The demand and depend upon high fees and have many extras. The advertised multitude of patients available for teaching purposes is a very tempting bait. The victim does not appreciate the fact that if one institution attends 10 per cent. of the whole population there are, within a mile, ten other dispensaries all depending on a portion of the remaining 90 per cent. He may at this stage of his life have fine ideas of elevating the poor and of the dignity of charity, and has not yet learned that pauperizing processes are not conducive to high

mindedness and that charity is not the "benevolence business." He goes through his whole course, supported by hope and a fund contributed by the self-denial of his whole family, till he gives his graduation fee of $30, and exits from college life in a blaze of gas and glory. He becomes a practitioner, puts up his sign and finds himself penniless. He discovers that he has been deceived—that his most pitiless enemy is the alma mater who received him so smilingly and relieved him of his last $30 with the ease and grace of a confidence queen. He realizes now that of the 10 per cent. of the population wrongfully under free treatment, two out of three individuals might pay him a small fee and one in three could recompense him handsomely. This year he learns that the clinic is to attend all the students of Columbia University in their own homes. Some of these pupils are the sons of wealthy parents and neither deserve nor need alms. The question of deserving poor or alms-receiving rich does not enter into the plans of the dispensary. The whole population must be able to save at the expense of the doctor in order that labor shall be cheap. So the young man becomes a member of the dispensary staff in order that he may obtain a few dollars by clandestinely sending patients from the "free" classes to his office—thus, by his aid in perpetuating the evil, the medical profession finds its charities, the viper warmed in its bosom which is stinging it again and again. The charitable and the taxpayer pay the expense. No medical union, on the plan of the laborers is contemplated. Personal jealousies are fostered by interested outsiders—the very governing boards actually think they do a physician a great service by allowing him to work for nothing. No position of trust is open to him; even the office of president of the health board is closed by law. He is not wanted as a commissioner of charity, yet the whole public service must cease without his gratuitous services in the hospitals. Membership upon the trustee boards of both hospital and the dispensary is denied him. The trustees themselves endeavor to arouse enmity between the specialist and general practitioner and are primarily responsible for the fact that worthless patients so crowd the institution that, for lack of time, the worthy can not receive proper attention. They promulgate the doctrine that the specialist has created the hospital and dispensary because he must have material to study and experiment upon. This is plausible reasoning, but its casuistry is made evident by the fact that any man can learn more from ten cases carefully mastered than from a hundred cases crowded in so fast that the most superficial diagnosis is all that is possible. The woeful daily mistakes resulting from such snap-shot methods is a significant proof of this.

The large sums spent out of public taxes for private institutions are wasteful and unnecessary. One-half this expenditure placed in the hands of a powerful charity organization society, could do all the work required and perhaps leave a surplus, simply by the exclusion of unworthy objects of charity, which deplete the treasury and burden the taxpayer. All private contributions for medical charity are superfluous if the thronging of public and private clinics by would-be paupers was stopped. At present the city is giving $1,500,000 per annum to establishments not under its control, and private persons in mistaken kindness are donating a great deal more. Including the excise fund of more than $60,000 a month and the four and a half millions requested by the Charity Commissioners, the city of New York, at a rough estimate, expends $5 per capita per year for charity alone.

What is the local effect of promiscuous beneficence? "a prostituting charity." John Stuart Mill expresses the idea thus: "A charity which makes twenty beggars while pretending to relieve one is a condition of affairs which makes it possible for some one to grow rich by administering the funds for the poor." We all know a neighborhood where the people were thrifty and contented before a medical college and its appurtenances appeared on the scene and initiated free treatment for all comers. The laborers, especially the younger ones, have become idlers; policy shops and loan offices have been opened; gamblers, dissolute women and opium "fiends" have appeared in such numbers that the locality is now named the "New Tenderloin." I have asked those addicted to morphin and loose women why they congregated near the dispensary, and their answers are appalling. The first say they can always "procure a jab" (hypodermic) when out of money. The second reply, "the female department is so crowded and the gynecologist so rushed that they can fool him and 'get a free abortion on tap.'" The speaker claimed personal experience; whether this be true or false, it is evident that the self-respect of the entire community has been undermined and the decent element is moving elsewhere. *Post hoc* if not *propter hoc*. The druggists know the status of the people and every apothecary can name many who are shameless in their abuses of charity. All classes are drifting to the dispensary, even the agricultural population. The country doctors inform me that only their richest patients can afford the time and money to take the journey to the city and stop at a hotel while obtaining free advice at the clinic. Surely the efforts at pauper-making may be said to be very successful.

The two parties most to blame are the millionaire and the medical man. The first enters the benevolence business for what it is worth to him; he may even think his contributions are doing good, though the smallest investigation by disinterested parties would prove the incalculable harm he is working to the very class he believes himself relieving. The medical attendants are only flies in the spider's web. They are engaged without salary and discharged without a hearing. On the first of November the visiting boards of six or eight hospitals were removed without any charges being preferred, and "reorganized" by a man who was "not impressed" by maggots in the patients' food.

You can not compel the capitalist to cease his donations, you can not obtain his ear against those who flatter his soul and place his name in the prospectus; the only remedy lies in the profession. That should demand that the poor should be treated like men and not like "clinical material."

In the public mind the doctors are all "good fellows," who are to give much and to get what they can. This is characteristic, as there is no human being lower in the social scale than the good fellow. The good fellow of the saloon "treats the crowd" and spends money for liquor that should buy his children's clothing, while his whole family depends in sickness upon the dispensary. The good fellow is the prey of the gambler and blackmailer. Goodness and weakness seem to be synonymous, and the final end of all good

fellows is they are cast into outer darkness after giving their best to the bad fellows: their course and termination is the same with the saloon hero, the Wall Street lamb, the card sharper's prey, and the physician at the hands of the trustee boards of the dispensary and of the commissioner of charity. The saloon, the gambling hell and the hospital can get plenty more good fellows to fill the places of those who now attend.

The people who formerly went to a consultant's office, now have a plain dispensary dress and consult him at a charitable institution. I have myself sent patients to well-known men and have received an opinion written on a dispensary blank—the gratuitous advice having been obtained by deception. A certain specialist charges $10 for an office fee; sometimes the patient demurs and is sent at once to the dispensary, regardless of the fact that many a younger man in the same line, and possibly a more careful worker, would be glad to obtain $5 for the same case.

The public can not believe that the profession is so imbecile as to seek positions which pay nothing, and consider that the places are sought for advertising purposes and for self-protection.

The fees for the specialist come, in most instances, from the general practitioner, but the practitioner is fast becoming an all-round specialist. Thus, through unquestioning charity, the specialist crushes the general man and he retaliates by sending cases to the dispensary rather than have a consultation. In the Manhattan Eye and Ear Hospital this is a common occurrence, and if an outrageous case is turned away, he proceeds immediately to the Vanderbilt, where no question as to length of pocket-book appears to be asked.

There is honor even among thieves—but the specialist and the practitioner, by suicidal and foolish bickerings, seem determined to prove that honor has fled from the grandest profession that ever shed luster on humanity. The medical "pirate" and the dishonest consultant appear with the lofty brow and amiable mien of the true philosopher, while they do deeds and participate in actions that even a bunco steerer would blush to contemplate toward his pals. The code is no longer the "Golden Rule," it has become the commandment of the Golden Calf. It is not "do as you would be done by," but "do or you will be done." Is it not evident that the whole profession is a most applicable tool, when pauperization is the work?

What is the remedy? The present condition is unjust to the tax-payer, and if the physician is a decent citizen he will stop enlarging our tramp class. In London I found many who would not work, because physicans and the charitable had made it easier for the pauper than for the laborer. Is it wonderful that the unemployed exceed a million in that city? In New York the dispensaries make it comfortable for those who wish to save the doctor's fee and spend it in the grog shop. I am now studying the transformation of men from clerks to rum soakers and then to tramps and I know that some of these men took their first step in pauperism in the clinics. I am convinced that some might be good citizens to-day had they not known the influence of such a family physician as came to my father's house when I was a lad. The institution crowds are maddening and confusing; they are only "clinical material" to the attendant, who becomes a doctor of medicine and not of humanity. He may say hastily to some miserable wreck, "you are a bum" or some equally helpful remark, but the words are very different in effect from a man-to-man statement, "your heart is damaged; if you do not stop whisky you are a dead man." All physicians know that the hospital builders are no friends to the poor, that the service as now conducted is no more charity than stone is bread. If the money required to found these great places was meant for the benefit of the laborer it would have been spent for better homes and hygienic tenement houses and then the workingman's medical requirements would have been very few.

Let the physicians resolve not to attend undeserving dispensary cases, the trustees will ask for resignation, let the outside members of the profession refuse to fill vacancies produced by removals without cause; the matter will be remedied. To the honor of Philadelphia be it spoken that a position vacated by such a condition of affairs was not filled, and the trustees became humble. In New York a whole hospital staff was dismissed without a notification of charges or discharges. The nominating committees of three medical colleges, the Mayor and the Commissioners were written to and a hearing requested by a committee representing 1,000 physicians; not one of those written to had the courtesy to reply. This is mentioned to show how little the authorities care for any stand the medical profession may take, short of a point-blank refusal to fill the vacancies.

Boston has adopted a system of cards which requires some investigation into the qualifications of each applicant for free treatment. Some physicians have started their own dispensaries under the hope that they can reduce the material of the teaching clinics, so as to bring them to reason and give the physician a chance to say who shall or shall not be paupers. Some of the brightest young minds in the profession are seriously contemplating entering on an advertising career, arguing that the hospital attendants only hold their positions for advertising purposes, and printers' ink is much quicker. The physicians of New York can have all the institutions put under the care of the Charity Organization Society; they could have the powers of that body enlarged to those of the "Gerry" and "Berg" corporations, and make the *sine qua non* of free service that every dispensary should be under the supervision of a capable and disinterested investigating body. A committee sent to the Legislature with a petition signed by the majority of those practicing under the laws of the State of New York could obtain all the power necessary.

The profession has a duty to the public of our city, and as no medical man has ever been deaf to the cry of "Give, give," let him not stop his ears to the demand of "Withhold." Let him always help "God's poor and the poor devils," but let him stop making or unmaking the "devil's poor." And let him ever set his face against any and all means used for increasing the awful burden of pauperism which our city is already called upon to bear.

POINTS BROUGHT OUT IN DISCUSSION.

The writer of the essay has not suffered by the action of the Commissioners and colleges and is simply interested as anyone might be in an act of contemptible injustice toward the profession of which he is a member.

The Commissioners pretend to have consulted only

the interests of patients; if so why did they not secure the best physicians by making the hospitals over to the Civil Service Board and fill vacancies by competitive examinations?

Were the Commissioners legally justified in turning public hospitals over to three close corporations, *i. e.*, the colleges?

Is the medical profession at large "riff raff," in contradistinction to about one hundred men connected with the teaching faculties?

Had there been a medical union as firm in resisting injustice as the Hod-Carriers' Assembly, would the Commissioners have dared to ignore its request for a hearing?

Why were homeopaths not molested? For political reasons and pull?

Was not the whole so-called "hospital deal" a transaction by which an ex-commissioner was to be re-appointed by the influence of certain men, to whom he turned over all the hospitals of the department of Public Charities of New York City?

THE TURKISH BATH IN MENTAL DISORDERS.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY L. FORBES WINSLOW,

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The treatment of disease at the present day is not based on "guesses" or "surmises" whatever might have been the case many years ago. This is the language of the empiric, not that of the man of science. There are intelligent men in our profession at the present time, who are now able to diagnose with extraordinary accuracy the pathologic changes going on in the brain, so wonderful has this knowledge become that it is not to be wondered at that we should gradually, but surely progress in the investigation of the treatment of those complaints. We learn from our experience that by opening the flood-gates of the skin from time to time, and submitting ourselves to the manipulation of the shampooer, in the oriental fashion, we may attain unblemished health under certain circumstances, both in mental and bodily complaints. During a long experience in diseases of the brain and nervous system I have had frequently to resort to the use of the Turkish bath as a remedial agent. I allude especially to cases of what is known as "brain fag." Where the victim to that complaint is reduced to a very low degree of vitality, I have found that after a systematic course of Turkish baths, that in many instances the mind recovers its wonted conditions and the brain exhaustion from which the patient suffers has diminished, if not entirely disappeared. The use of cold shower baths in the treatment of mental disorders has been known to the profession for a great many years. I have also found the Turkish bath beneficial in the treatment of some cases of acute mania. A patient is brought to the asylum in a state verging on cerebritis, and exhibiting all the well-recognized symptoms of sanguinous congestion of the brain. He is wildly delirious, the scalp burning hot, the skin dry and parched, the conjunctivæ injected, the pulse rapid; it has been found in such a case that material improvement has taken place, even after the first Turkish bath has been used; but in such a case I would not advise a prolonged one, but of short duration, each alternate bath to be of increasing length in gradations. In the treatment of acute brain disease I would suggest that the whole process should not exceed half an hour for the first bath.

"Without principles," says the great Dr. Cullen, "deduced from analytical reasoning, experience is a useless and a blind guide." Appreciating the truth of this *dictum* we are naturally led to ask ourselves the question as to the rationale of this treatment in acute brain diseases; the answer plainly is the gradual and general lowering of the vital powers causing a certain nervous prostration, by means of which the cerebral vessels become relieved, and the system calm and quieted. In insanity, the *vis vitæ* is often reduced to the lowest possible condition. In the great mass of acute cases of disordered mind which the physician is called upon to treat, particularly in our public institutions, the nervous system is in a state of positive exhaustion and debility.

The furor, the violence, the maniacal excitement; the muscular resistance, so often associated with insanity, are generally symptomatic of profound nervous and vascular depression. The excitement of the insane is an excitement without power, and it must be left to the discretion and experience of the physician versed in the practical use of the Turkish bath to discriminate as to in what acute cases it may be used beneficially, for we must recognize this important pathologic fact that in some cases it is our duty to conserve and husband the flagging and ebbing vitality of the patient until the mind recovers its equilibrium. If in the treatment of acute brain diseases the Turkish bath is prolonged in the first instance fatal results may follow; of this there is abundance of proof; therefore in its use, in such acute diseases, much discretion must be used. Insanity does not result from active inflammation of the brain, and if such were its origin no physician would be justified in attempting to prostrate the system of those mentally disordered. In cases of profound cerebral excitement, the patient often recovers under the combined influence of a tonic and stimulant treatment. I have known violent mental perturbation considerably mitigated and often cured by the administration of stimulants combined with iron and quinin. Here is an instance where it would not do to prostrate the patient but to stimulate him; so in dealing with the use of the Turkish bath in such cases it becomes the imperative duty to consult one versed in its use. I wish seriously to draw your attention to what I have just stated, and also to further say than an excited patient may be made manageable and docile for the time being, but it will be quietness and docility gained at the expense of his reason and perhaps of his life, if the inexperienced in its use allow its adoption to be prolonged in such mental cases as I have just described.

Treatment of insanity by baths of various description has long been in vogue in various countries. Esquirol, the first to find fault with and denounce many of the abuses found in the treatment of the insane, freely used the cold douche shower bath in the treatment of insanity and to the use of which he attributed the cure of many of his patients. In his "Maladies Mentales" he records cases where the cold affusion was followed by tranquility in the first instance and a repetition of it by a complete recovery. A second case is mentioned where the use of the bath

was followed by shivering, and a slow weak pulse and ultimately by sleep. The latter lasted for four hours during which period copious sweating took place but on awakening the delirium had passed away and reason had returned. Esquirol concludes from his experiments. "That the douche on the head has a sedative physical action, on account of the cold and a moral action as a means of repression. The generality of convalescents declare that they have experienced benefit from its use and some patients ask for it; *il ne faut fas en abuser.*"

The danger, however, of too frequent use of the cold shower bath came to be recognized, and to prevent a misuse of it, the Commissioners of Lunacy in England framed a series of laws to regulate its use. It is now but rarely made use of except in neurasthenia and in hysteric subjects, in both of which cases it exercises good beneficial results, especially when it has been preserved in, and in some cases of melancholia the duration of the bath lasting from fifteen seconds to half a minute. The warm bath is a wonderful remedial agent in tranquilizing the nervous system and acts frequently as a powerful soporific and allays mental irritation.

The Turkish bath has also been used in alcoholic cravings, and with a certain amount of success. The functions of the skin are two-fold, that of secretion and absorption; by it we perspire and by it we may be said to breathe. It is a well known physiologic fact that the oxygen absorbed by the skin through its seven millions of pores has the same effect as that taken in by the lungs, the purification of the blood, and the supply of caloric to the body. The Turkish bath causing profuse perspiration, and so opening and cleaning the seven millions of pores renders them permeable in an increased degree to the oxygen which burns off the effete matter left by the stimulants; increased vigor and vitality are thus given to the system and the alcoholic craving is diminished.

The Turkish bath may be used beneficially in certain cases of melancholia of a recent nature, without any possible risk ensuing; it often calms the nervous system and often reduces the mental depression. Also in cases of threatened recurrent mania, it sometimes cuts short the attack if used immediately the symptoms are returning. At one epoch in medical science depletion was freely used in cases of insanity; this then for a time disappeared altogether but it is now coming into use again with some physicians. The idea used to be that the depressing, lowering and overpowering plan of treatment of the insane was most disastrous in its results. It was then considered by all practical and sagacious psychologists experienced in the care of the insane that in the morbid affections of the mind a condition of brain existed which would not tolerate a depressing and prostrating mode of treatment. There is a vast difference between the use of the cold shower bath in the treatment of insanity and the use of the Turkish bath. In the former there is an immediate depression and prostation of all the vital energies and the effects sometimes prove rapidly fatal. Consider for one moment what would be the effect of using a prolonged shower bath in the treatment of delirium tremens, or in a case of puerperal mania, or the insanity following such a condition. In this class of cases we often witness extreme excitement and violence associated with profound vascular and nervous depression. How dangerous then must be the cold shower bath in such a condition, entirely overlooking the pathologic state of the patient. If the treatment of the insane be a rapid reduction of the physical and mental powers of the patient to the minimum standard; if it be all important to make a noisy, excited, destructive lunatic tractable and quiet so as to preclude the necessity for the use of mechanical restraint, then continue the shower bath; but if it be the intention to carry out a proper curative mode of treatment by some form of ablution then the Turkish bath has proved itself to be the remedy needed in such a case. I have known many instances of death resulting from the unwise use of the prolonged cold shower bath in the treatment of mental disorders, but I know of no instance where such has resulted from the Turkish bath.

Let us ask ourselves what would be the result on a patient suffering from a depressing and exhausting disease, and insanity is especially of this type, on whose head was allowed to fall a continuous volume of cold water for a period varying from a quarter to half an hour, as was formerly practiced in some large asylums. He emerges from such a bath with the powers of life reduced to the *minimum.* I have records of thirty-two cases of acute insanity treated by the prolonged use of the cold shower bath, with the following results: Fourteen recoveries, one death, the others remaining in the asylum. I might mention that in these cases it was used periodically, as occasion required, and was prolonged for the time I have previously mentioned. It is specially fatal in the earliest stage of acute mania and may be called an heroic treatment. In many cases it was apparently made use of in instances of insubordination as a means of quieting the patient and with effect. The plunge bath was formerly and sometimes is now substituted for the cold shower bath. But this appears to me to be the old story of *Scylla and Charybdis.* I do not know whether any of my audience can realize exactly what I mean by a plunge bath in the sense I am now using it. A violent and excited patient is forcibly taken by his legs and plunged head foremost into an ordinary swimming bath. He is not permitted the use of his limbs when in the water, but is detained there, or taken out and plunged again into the bath, until the required effect of tranquility is produced.

Quietness, submission to authority, docility and freedom from excitement and violence are the natural consequences of this gentle soothing treatment. I say most emphatically that both the prolonged cold shower bath and the cold plunge bath, if used at all, are generally made use of for obstructive patients, and not as a remedial agency. In cases of neurasthenia or hysteria such a treatment is often very beneficial, but not in dealing with insanity pure and simple, especially in chronic violent cases.

Now the Turkish bath is used entirely as a remedial agency, not a means of unwarrantably controlling the individual. Its use has been generally adopted in England since 1861, when it was first introduced into my country and used extensively but Dr. Lockhart Robertson, the late Lord Chancellor's Visitor of Lunatics in England, and Dr. Power of Cork, were the two first to introduce the Turkish bath into the treatment of insanity. The first asylum for lunatics where a Turkish bath was constructed, was the Devon County Asylum. It was here found useful in certain cases of melancholia, where the skin was hard and dry, and in some cases of dementia. At the time of

which I speak the use of it was in its infancy. I was requested at the opening of the second series of Turkish baths in London to preside as chairman; this was about twenty-five years ago. While in your country last year I derived much pleasure from a visit to Dr. Shepard's Turkish baths at Brooklyn; I found them in every way perfect and quite up to date in every possible requirement. When the Turkish bath was first introduced into my own country it was said by some that so long as we diligently and regularly had resource to the Oriental bath neither malaria nor miasma nor infection nor the poison of fever could find a lodgment in us. All that was hurtful would be swept away in the health-giving, health-preserving perspiration which streams forth. The mind and the brain, nay the whole of the nervous system, central and peripheral, would hold their own against the deteriorating influences which haunt our daily life. Man may indeed confront the world, armed in proof at all points against every danger which may assail his frame, whether wholly or in detail, from morbific agencies, if he can only be persuaded to habituate himself to the use of the Turkish bath. Its chief action is depuration by the skin, but it also acts by diuresis and its effects as a narcotic and tonic are well known. It may be considered, in fact, to be a complete materia medica in itself. I think that all those physicians who have advocated its use in the treatment of disease and especially of insanity, will never regret so doing. It has been left, however, to the wisdom of the nineteenth century to unveil the therapeutic use of the Turkish bath, and I trust that the few remarks I have to-day made may further its continous use for the benefit of humanity in general.

THE THERAPEUTIC ACTION OF THE TURKISH BATH.

Read in the Section on State Medicine at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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My long experience with the Turkish bath prompts me as most essential, before going into the therapeutic aspect of the question, to make you first acquainted with the tools with which you have to work in order to obtain good results. All Turkish baths do not correspond to the requirements of modern science and vary so greatly in this respect that many of them now in existence should cease to exist on this ground. We doctors try to do the best we can for the public and ought to direct the patients only to baths which we have ourselves examined so that we can recommend them conscientiously for curative purposes. But, alas, how many bathers do consult doctors, and how many doctors have taken the trouble of studying balneologic details; hence bathers go to any Turkish bath they hear of without any previous or proper instruction. From my experience of the Turkish bath, I must greatly impress upon your consciences as doctors the necessity of going and examining personally each Turkish bath and better still to have personal experience of the bath before advising your patient. I acquired this knowledge theoretically and practically when I rebuilt in 1883, with my good friend Mr. Thomas Duarans, the eminent architect in London, the Turkish bath at the Royal York Bath, York Terrace, London, N. W. We studied together the subject of building a Turkish bath according to the requirements of modern scientific principles. When we considered the architectural plans, we based them first on sanitary principles, and adopted the beautiful Moorish architecture for secondary reasons; but the drainage system and the ventilation claimed our first attention. We gave the drainage a good fall for the rapid off-flow of the water and erected the plunge bath that holds over 5,000 gallons of water at the end of the whole drainage system, so that a thorough washing out of all the pipes is obtained by giving the necessary speed and power to the stream and therefore cleanliness and freedom from all dirt and bad smells. A fall of 1 foot in 15 feet within the length of 120 feet between the plunge and the sewers was adopted. The diameter of pipes six inches. Equidistant manholes enable us to open the entire system for the inspection at any time with convenience and to brush the pipes out in case of stoppage by accident and to observe if the sediment pass down. This is essential. At the deepest manhole, and that nearest to the sewers in the street, an air-shaft is built to admit the fresh air which is drawn through the pipes by means of exhaust shafts at the top end of the drains. Thus, the air flows in the reverse direction to that of the water. The waste pipes from the bath and the rain pipes are separated from the main pipe-drains discharging into a side inlet gulley which has an open gridiron top for the admission of fresh air and passage of the cleansing brushes or rods.

The next point was the ventilation of the suite of rooms of the Turkish bath. This was attained by building a tunnel 75 feet in length, 5 feet in width and 7 feet in height tapering toward the furthest end where the furnace is situated beneath the hottest room. In this way the fresh outside air is forced toward and into the space around the convoluted iron furnace, and with such a velocity that the draught on the candle flame visibly indicates the constant current of fresh air to be heated and finally enters the hottest room above through the open grating. In this room which is a vault of glazed white bricks with an ornamental colored skylight in the roof, a temperature of 250 to 300 degrees Fahrenheit can be obtained as required, but 230 or even 210 degrees are sufficient to produce perspiration with ease in the shortest time possible in the habitual bather. The second hot room is between 170 and 180 deg. F., and the communicating first hot room is about 130 F., and the next communicating shampooing room is 110 F., and the douche room 90 F. and so on. The plunge room and the cooling room are about 65 F. All these rooms have large colored skylights to admit sunshine or daylight, and when dark gas-burners within large white and ornamental globes of 20 inches diameter, are arranged so that the products of combustion do not mix with the air of the rooms. At the bottom of the seats around the rooms are "hit and miss" exhaust grates by which the vitiated air, from perspiration and exhalation being heavier in specific gravity and accumulating nearest the floor, is drawn off through upcast shafts outside the roof. This principle of ventilation ensures a constant stream of hot air through all the rooms, and so great is its effect on the Mosaic floor, through the created friction caused by its uninterrupted flow from above downward and out through the upcast shafts, that the floor appears to a new-comer

to be heated from underneath; slippers are required when walking on the floor, and sheets when lying down on the marble plates around the walls. I need not describe the shampooing methods, nor need I speak of the shampooers who work according to my system, and make use of the soap and brush, showers, needle-bath, douches, etc.; but this description I think will show you sufficiently in an abstract way, that the first essentials of a good Turkish bath are a free circulation of pure air with plenty of oxygen, sufficient heat and good light. The dryness of the air in the hot rooms is most strikingly proved in a foggy London day, when the bather enjoys this beautiful change of pure air, free of mist, and feels contented in this clear, hot atmosphere within the Turkish bath as nowhere else. It is evident that this artificial dry, hot air is a happy imitation and substitution for the natural hot dry climatic resorts where patients are sent to by their medical advisers, like Madeira, Egypt, Algeria, Australia, India, etc., especially for lung and kidney complaints. Under certain conditions and circumstances many patients are unable to leave their homes and are bound to remain in this country and do the best they can for their health. For these the Turkish bath proves a great boon, and you will understand with what safety you can recommend your patients to avail themselves of what constitutes a good sanitary Turkish bath. Oxygen is the great want in a hot air bath, particularly for weak people or weak lungs. It is true we have also in England excellent places for consumptives at the South Sea Coast and the Channel Islands; but when patients have to return to their homes in sooty, foggy towns, it is frequently the case, that their improvement vanishes, the air being too polluted; for these the Turkish baths are a delightful change. Advanced cases, to be sure, ought not to be sent away to distant countries, which deprives them of the comforts of their home, their friends, their relatives, their native language. I have made it my principle not to send patients away unless they are wealthy enough to procure for themselves the utmost comforts possible, and when they have improved in health I do not allow them to leave the security of their new homes for the risks they run in a wet and cold climate.

The literature on the Turkish bath is not very great, particularly by men of science and learning. On the physiology of these baths we find besides Urquart and Sir Erasmus Wilson only exceptional papers like those of Dr. Bucknill in the *Lancet* of 1876, of Dr. Cameron in 1877 and of Dr. W. J. Fleming, Lecturer on Physiology, Glasgow, 1879; the latter investigated the effects of immersion in hot dry air, and his conclusions are:

1. That a very large quantity of material can be eliminated from the body in a comparatively short time and, although the greater part of this is water, still solids are present in quantity sufficient to render this a valuable emunctory process.

2. The temperature of the body and 3, the pulse rate are markedly raised.

4. The respiration falls at first but afterward is less influenced.

5. The urine is increased in density and deprived of a large portion of its chlorids, while, if anything, an increase in the amount of urea is produced.

6. The sweat was found to have an average specific gravity of 1006.3; faintly alkalin, or neutral; the collection of the sweat, its determination and analysis require further experiments.

7. The principal effect upon the arterial tension seems to be an increase produced by the greater rapidity of the heart's action combined with a dilated, we may almost say, gorged condition of the capillary circulation.

Dr. Fleming's deductions from these conclusions as to the use of the Turkish bath in medicine are: Its most important effect is the stimulation of the emunctory action of the skin. By this means we are enabled to wash, as it were, the solid and fluid tissues, and especially the blood and skin by passing water through them from within outward. Hence, in practice, one of the most essential requisites is copious drinking of water during the sweating. Persons of sedentary habit or suffering from disease interfering with fluid excretion will, therefore, benefit very greatly by the use of these baths which produce such a reaction of the skin, and by its means considerable elimination of morbid matter may also be brought about. On this point there is but one opinion of all the writers, who also agree that sweating in these baths relieves the internal congestion on the same principle and with much greater certainty than the usual diaphoretics; besides it softens the skin, relaxes the muscles and permits more readily of passive movements called rubbing or shampooing, which follows systematically and enhances the process of perspiration during the manipulations. The shampooers who work so many hours a day in this hot air perspire very freely and enjoy the best of health, although they constantly pass from hot into cold and vice versa. So every one can harden his skin and accustom it to these changes by taking a Turkish bath twice a week; it will then be difficult for people to "catch a cold." Should a shampooer get one he will cure it by the next following copious perspiration followed by a shower of cold water or a cold douche. This may appear alarming to the inexperienced, but in practice it proves grateful to the sensations and is wholly free from even a shadow of danger. In fact, immunity from colds is thus acquired by persevering in Turkish bathing; the triple faculty of preservation of health, of prevention of disease and of curing the same is thus exercised by the action of the skin, which repels the depressing effects of cold by its intrinsic power of generating heat, and it also expels miasmatic poisons by its emunctory power. The malaria is eliminated from the body in this simple way; the chill passes into heat and the hot fit is transformed into perspiration. Gouty and rheumatic poison in the form of uric acid and urea is constantly eliminated by perspiration in the Turkish bath, and a man who has taken too much alcohol can with proper care expel it rapidly by the lungs and skin during the stay in the bath. What is eliminated by the Turkish bath is the excess of effete matter, which the weak body or degenerate organs can not excrete and which if retained by the inefficient action of the skin, liver and kidneys, is the prime cause of chronic disease. It is, however, not only the action of dry heat in the bath, but of hot, dry oxygenated air in the internal organs through the lungs and circulation, as well as on the skin which is so beneficial. The bath not only cleanses the skin, but purifies the whole circulation and blood, effecting a thorough cleansing of the system. A deficiency of oxygen and an excess of carbonic acid gas is the first cause of bad health, whatever form the symptoms may take. Ignorant people, and I am sorry to say many medical men, have an idea that the

Turkish bath is weakening or that its only immediate effect is "to bring down fat." Sweating, it is true, under abnormal conditions—in the fetid workshop or crowded assembly rooms for instance—is weakening, but it is far different when perspiration is naturally and beneficially induced in and by a thermo-oxygenated atmosphere. Here the life-giving oxygen replaces during the action of the bath the impurities of the blood. People who suffer from eruptions of the skin which indicate the too rich or too poor blood, or in fact, an impurity of the blood, by appearing on the surface of the skin in the form of pimples, boils, carbuncles and abscesses, eczema, herpes, etc., see these unpleasant and painful manifestations disappear after the first Turkish bath. They may expect if they persistently use this purifying process twice or three times a week that they will never see these complaints return again. In the Turkish bath we learn to distinguish by the eye and the touch the weak and the strong, the healthy and the unhealthy skin. In the bath there are no wrinkles and no decrepid age; the skin becomes firm and elastic, recovers color and smoothness and even upon the scalp of the bald, I have seen the hair return. The skin may have a deficient and imperfect circulation of the blood and a deteriorated sensibility, a defective cell-formation and secretion, and exhausted tone and vigor, but you may take it for granted that the habit of the bath will reverse these unnatural conditions. I remember how greatly it impressed me when taking my first Turkish bath. I placed my quickly heated hand on any part of my skin and felt a sensation of coldness; soon, however, the whole skin became warm and dry, then moist and soft, and finally I saw the pores opening, the humidity on the chest and arms gathering into drops like the dew on flowers or grass when garnished with crystal beads; the beads running into little rills, and the rills trickling down in small streams so that the whole body admitted of being washed by means of the water that issues from the blood.

Believe me, the bath is a preservative of health, a prevention of disease, and it will cure most chronic diseases when persevered with. How many cases could I describe from my practice that have lost their chronic bronchitis, their asthma, their inclination to catching cold in the nose, the pharynx, the Eustachian tubes, their larynx and vocal cords, who had crackling in their joints when moving them, even in the jaw joints so that bystanders could hear the masticating movements. All this rheumatic, gouty, scrofulous and other constitutional dyscrasias which so easily cause local deposits, show their evil existence and manifestation of sufferings in headache, earaches, neuralgias, giddiness, deafness, singing in the ears, etc.; all these inherited or acquired weaknesses of constitution and illness are curable and preventable, but the baths must be persevered with during the time you are apparently free from disease. I mean you must not only take the baths when you are ill or suffering but during the intervals when you are seemingly well and healthy; then you will preserve your health and prevent any development of a cold, because it is the first cold that has the tendency to localize somewhere and produce mischief of longer duration. Shampooers always enjoy remarkable health because they at once cure their cold. If you want to know what regular perspiration in a Turkish bath can do, you must watch others and watch yourself most scrupulously and you will soon learn how true it is that perspiration in hot and well oxygenated air with all the manipulations of the Turkish bath will prevent congestion of the internal organs like the brain, spine and nerves as well as the organs lying in the thoracic and abdominal cavities. These congestions and inflammations from colds in certain constitutions with proclivities and inclinations of localizing in the periosteum, the muscles, the fibers, mucous, serous and all other tissues of our body may become very serious and dangerous, but the perspiration drives the blood from the internal parts to the peripheries or skin and frees the internal organs. When cold has chilled the skin, driven the blood inwardly producing shivering, headaches, etc., a weak spot exists *locus minoris resistentiæ*. To drive it out again you must go to the Turkish bath at once and get rid of the first attack; then you prevent disease and cure it at once at its start. It represents the whole principle of balneology and should be had recourse to by everyone, immediately he is seized with disease whenever and wherever possible. It is useless merely to treat a cold when it appears; the proper and effectual way is to persevere with the bath, even when in apparent health. It is very curious to hear how often you find the Turkish bath praised, by doctors, for its effect in reducing the bulk of fat people, and how difficult it is to bring them to acknowledge how wonderful Turkish baths are in restoring, for instance, a weak heart and circulation to strength. The heart is naturally a very powerful muscle which does an enormous amount of work in twenty-four hours, in order to pump the blood by each pulsation into all the arteries of the body. The innervation of the heart is frequently disturbed and its muscular power impeded so that the blood vessels of the skin do not sufficiently dilate and keep the circulation free. Most nervous complaints produce palpitations, but indigestion is frequently the first cause. Through overfeeding fatty degeneration is induced as well as through alcoholic intemperance. I advise abstinence, regular walking exercise and a Turkish bath in such cases with excellent results. They stimulate the skin, depurate the blood, relieve internal organs of congestion, relax spasms, improve digestion and assimilation and restore vigor to the body even when exhausted by bodily or mental labor. The hot-air bath has a quieting effect on the heart, especially, as all shock is avoided in undergoing the sweating process. Patients suffering from disease of the heart obtain instant relief in the bath, although the number of pulsations is increased. The more the pores are opened and the perspiration enhanced, the greater is the relief and the gradual improvement in the health of the patient. Cool ablutions and drinking of pure water must not be neglected. Persons can avail themselves of the benefits of the Turkish bath with less risk than attends ordinary medicinal treatment in nearly all forms of heart disease, because the skin becomes very inactive in heart disease, and the oppression in breathing increases; immediately, however, the skin becomes moist and active, the oppression subsides and the patient is relieved. A hot drink before entering the bath, and deep quiet breathing when extended on the back, or reclining in the chair accelerates perspiration and soothes nervous irritability, giving a happy feeling of relief. Directly the skin is active the internal conditions are relieved and the improved condition of the circulation through the body is reëstablished. It is simply marvelous how in this way the

action of heat affects beneficially all organic complaints not only of the heart, but also of the liver, the lungs, etc., immediately the skin acts. Thus, even in incurable complaints, the Turkish bath proves a source of comfort when all other means have failed, as in dropsy, anasarca, edema, etc.; the intelligent administration of the Turkish bath is the great desideratum if it is to be used as a medicinal or curative agent and not merely for nettoyage. The competency of the people who have the direction of the Turkish bath establishment is a *conditio sine quâ non* and doctors should sometimes take the first bath or two together with their patients to give them confidence; but notwithstanding all the blundering managements in Turkish baths without doctors, there have been fewer accidents and more good results from their use than one would reasonably expect under such conditions. People with hypertrophy of the heart and a very powerful pulse have to be careful in taking the Turkish bath and must follow special advice, particularly if giddiness and headaches complicate the complaint; but people of what we call an "apoplectic" build will do well to take the Turkish bath regularly, and to accustom themselves to the change of hot air and cold ablutions. In very hot summers when apoplectic fits are frequent, habitual Turkish bathers will not be likely to stand in fear of these but will find a great advantage and comfort when leaving the bath to find that 80 degrees F. in the shade feels agreeable. We never hear of a death from syncope in a Turkish bath. Sunstroke never occurs in people who perspire copiously from the head and neck. Cold hands and feet, biliousness, stitches in the sides, lumbago, sciaticas and neuralgias of all kinds are indications for habitual Turkish bathing. Predisposition to fainting, palpitation, sinking feeling give way entirely to the gradual use of the Turkish bath. People who can endure a heat of 200 degrees F. with comfort and afterward take a plunge of 60 degrees F. or less are sure to remain in a strong and good condition of health. unless they commit excesses in eating and drinking, or contract influenza or malaria, etc.

I know bathers who have been living now comfortably for over twenty years with symptoms of softening of the brain, chronic alcoholic poisoning or nervous tremor, and constantly speaking of themselves as improving, and others who complained of restlessness and sleeplessness at night were entirely cured and slept as well as ever after every Turkish bath. The supposed danger of a Turkish bath to elderly people is quite a fallacy. Physiologically, pure air and exercise are as necessary in old people to keep up health as in young ones. Indeed, they want these more to restore a certain amount of lost vitality. In fact, the bath is of great value in prolonging life in the aged as well as in the diseased, and I know many old gentlemen between 65 and 85 who keep in vigor by taking their Turkish bath regularly once a week.

As to our brains and nerves, the close connection and reaction between the mind and body are indisputable proofs that the right action of the mind greatly depends upon the health of the body and consequently of the senses, for they are inseparable in life while the nerves are capable of their functions. If we possess pure blood disease is baffled, blood being the material out of which all the organs repair themselves its deficiency in quality and quantity lessens the energy of the brain's functions. A stimulant—be it alcohol, tea or coffee—accelerates the circulation and increases the vascular supply. I always recommend a stimulant in a weak heart before the bath for weak persons until they can do without. I never recommend it after the bath; rest and a good meal must take its place after the Turkish bath. One writer fears the bad reaction of the stimulant; I have never observed it in practice; but I always try as soon as the patient is accustomed to the Turkish bathing to recommend cold water in place of the stimulants in the bath. Another writer uses stimulants and says people require a stimulant before they feel "fit," I suppose, for brainwork. Now, before I used the Turkish bath for sleeplessness I always had a good result from a stimulant for sleeplessness in people with a weak circulation and with mental worry and over-fatigue, and the dose must be a full one, for a small dose would produce mental excitement. To excite rapidity and intensity of thought one writer recommends the Turkish bath, "If," he says, "I require to think out a knotty point, I take a Turkish bath; my mind is clear, my judgment more keen and my loftiest and purest thoughts come to me during the process of blood arterialization."

There is not the slightest doubt that for the brain, the spine and the nerves the Turkish bath is excellent, and even noises in the ears and head may be cured or mitigated; but should the complaint want additional help in order to rectify and bring it to normal conditions of health, I always give the preference to the natural means of treatment, among which massage and electricity form the principal ones.

I have cured several cases of deafness which were given up as incurable by specialists. One of them, Mr. R. A., had to retire and take his pension—half-pay—at the Trinity House, when nine years later I unexpectedly restored his hearing by massage and Turkish and electric baths. "What a pity," the patient then said, "had I known of you before I spent all my money with specialists on the continent and in England, I would still have been in office to-day with full pay." However, let us hope that others will profit by this experience. He is now 74 and takes his Turkish bath frequently, being mentally very active, and, I am happy to say, useful to his family and to society.

I have not said anything about febrile diseases with high temperature, nor have I given opinions about treatment of hydrophobia by Turkish and vapor baths, the paper being already too long, but I repeat my warning, that a Turkish bath establishment which does not invite the doctors and the public to inspect their drainage and ventilation systems, or which refuses to show these must be looked upon with great diffidence and had better be avoided; there can be no mystery-pleading in these things, and the public has a right to see all. Therefore, allow me to impress, let the public constitute themselves their own inspectors and fearlessly demand of each Turkish bath proprietor a display of the ventilating arrangements before entering the bath.

Military Hospitals Thrown Open to the Civilian.—The German authorities have decided that civilians residing near military hospitals can be received and tended in them whenever the physician considers that transport to another hospital might be injurious. A decree in France also opens the military hospital in places without hotel accomodations, to civilians who apply to the chief of the department. The prices are to be the same in both countries as for the lower military ranks. The *Bulletin Méd.* July 12, strongly deprecates this transformation of the little hospitals in the colonies into boarding houses.

PUBLIC TURKISH BATHS NEEDED.

Read in the Section on State Medicine, at the forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY CHAS. H. SHEPARD, M.D.

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The action of the New York Board of Health in appropriating $30,000 for applying the discovery of antitoxin in the treatment of diphtheria, encourages the hope that in the near future the public mind may be quickened to recognize its opportunities and its necessities in other and broader fields. It is time to appreciate the fact that we are our "brother's keeper," and that whatever works harm to him reacts upon ourselves. This action of the Health Board also indicates a growth in public sentiment that will encourage and sustain important measures for the public welfare. It is a moral duty as well as a principle of public polity, in all civilized countries, to protect the people from the invasion of infectious disease, and it would be very short-sighted to stop at mere infection. The use of antitoxin is only to supply a temporary exigency. It does not purify the homes of the people or teach them to take better care of their bodies or sanitary surroundings. We need something to uproot the cause of the disease, and when this is secured, it will be found that many other diseases have disappeared.

The Romans understood and perfected public sanitary works on a most stupendous scale, as is witnessed, among other things, by their aqueducts for bringing pure water to the city of Rome. Magnificent ruins of many of them are standing to-day, and some of them are in use at the present time.

It is known that in India, the home of cholera, the city of Calcutta is now protected from epidemics of that fearful scourge by the supply of comparatively pure water that has recently been furnished the city.

When the community can be assured of pure water to drink and pure food to eat, with proper bathing facilities, the enjoyment of life will be much enhanced and its length prolonged.

In a recent report of the Committee on National Quarantine of the New York Academy of Medicine, it was stated that "the most certain protection of this or any other country against the ravages of infectious disease, lay in the practice of internal sanitation." What is true of the State is also true of the individual. The more cleanly a man's habits, and the purer his food and drink, the less liable he is to disease, because his body is thereby rendered naturally immune to disease. Whatever our theories as to prophylactic measures in the prevention of disease, the production of a barren soil for the growth and development of pathogenic germs is of greater importance than the destruction of the germs themselves, though efforts should be made in every direction for the elimination of all diseases. Various theories have been offered by different authorities concerning the processes and changes that take place in the body in consequence of artificial immunization, but the scientific controversy regarding it has not yet been settled. Suffice it to say, that the more pure and active the fluids of the normal living body, the more powerful are the bactericidal properties thereof.

There is at present a revival of a favorite practice of the ancients, and that is their system of bathing. The old Roman baths, which are identical with the Turkish baths of the present day, were prominent features of the daily life of the Romans and were counted among their choicest privileges, and so continued during the period of their greatest prosperity. They were then carried to a scale of perfection never surpassed. The baths of Diocletian, which were the largest ever built in the world, were capable of accommodating 18,000 bathers at one time.

We have heretofore maintained, and would reiterate, that as one of the great sanitary necessities of the day, it is most desirable that large public Turkish baths, as a preventive of disease, should be established throughout our cities at public expense, placed under medical supervision, with admission at nominal rates, so that the poorest individual could partake of their advantages with a feeling of self-respect in paying something for the help and comfort to be derived therefrom. They should be made attractive, and thus draw people from demoralizing enjoyments. This would react on the social life of the community, and by purifying the people would purify their homes.

We support public schools, and compel our children to attend them. With more propriety could we furnish public Turkish baths, and insist upon every man, woman and child availing themselves of their luxuries at least once a week. The physical is of greater importance than the mental; indeed, it is of the first importance to the State.

Herein would wealth have a royal opportunity to consecrate itself to the service of mankind. The endowment of public baths was among the most noble actions of the Roman Emperors. Eight hundred of those institutions adorned the capital of the empire, and they supplied, during many eventful years, almost the only medicine to a people distinguished for their corporeal and mental vigor.

Among the important results that are brought about by the use of the Turkish bath may be mentioned: 1, a perfect cleansing of the external body, and relief from any undesirable odor, replacing therefor the beauty and fragrance of health; 2, a purification of the blood by the elimination of its impurities through the surface of the body; 3, an equalization of the circulation and perfect distribution to and through every organ and tissue of the body, however remote; 4, the speedy elimination of blood poison, laying the foundation for; 5, increased nutritive changes throughout the whole body; 6, a relaxation by heat of the tissues of the body, and thereby relief of congestion, whether located in the lungs, bowels or other organs of the body, or in the muscular tissues, as shown in the relief from rheumatism, malaria, etc.; 7, absorption of exudates and inflammatory products; 8, better ventilation of the lungs, and the placing of climatic treatment on a scientific basis; 9, greater activity of the secretions and excretions; 10, the prevention and the eradication of the predisposition to disease; 11, strengthening of every vital organ, and therefore an increase of vital capacity.

The arguments in favor of public Turkish baths are both manifold and important. To enumerate but a few of them:

They would be comparatively inexpensive.

They would lessen the cost of medication.

They would prevent the spread of epidemics.

They would render extinct many classes of diseases.

They would lessen the demand for stimulants of every kind and render the police force less necessary.

They would be more powerful than any law of prohibition, because they would be more attractive than the saloons.

They would reduce the expenses of hospitals and asylums.

They would shorten the time necessary for patients to remain in such institutions.

They would reduce the demand for hospitals, so that what are already built would be sufficient for a generation to come.

They would help toward the refinement of the community.

They would vastly prolong the average of the life of the people.

They would add to the enjoyment of life, by making everybody healthier and happier.

They would tend to render the cities that adopted the bath preëminent among all the cities of the world, and be an example for all other cities to follow.

They would redound to the honor, and conduce to the growth of such cities, and continually increase the numbers of the better elements of their citizens.

They would uplift the community and tend to develop a superior race of mankind, as handsome as were the Greek models, and as powerful as ever were the Romans.

To the individual the Turkish bath is the perfection of sanitary science, and to the nation it is the coming blessing.

These few reasons but imperfectly state the great need and many advantages that would accrue to the community adopting the practice of public Turkish baths.

DISCUSSION.

DR. KELLOGG—This subject is one of very great importance. I am sure that there is nothing so valuable, as a health measure, as public baths. In different parts of Europe I have noticed that where there are public baths the cities possess a superior class of people. On the streets of Stockholm I saw some very fine looking men, stalwart and ruddy-faced. There you can get a public bath for five cents. There are several in the city; for twenty-five to fifty cents you can get a better bath. There are different grades, so that all classes are accommodated. Connected with these baths are laundries also, so that poor women can wash their clothing.

Three years ago I attempted some missionary work in the way of establishing free baths in Chicago. I wanted to find the wickedest men in the city. For this purpose I consulted the chief of police, who told me which was the worst place in the city. There I put in fourteen free baths. There was a gospel mission next door. I asked the superintendent of the mission what he thought of the idea. He did not think it amounted to much, but I nevertheless determined to proceed with it. There was but one place where a man could get a bath without paying for it, and that was by falling into the lake, and there was a law against that. Two or three weeks afterward this same gentleman came to me and said that he wanted to shake my hand; that the baths had changed the complexion of many of the people as well as of the community. The baths were patronized by men who were so black you could not tell to what race they belonged. I was astonished to see how anxious the lower classes were to be clean. I spent Sunday there until within the last three years; I found one December morning, when the temperature was a little below zero, 180 men in line, the nearest one against the door, waiting to wash their bodies and clothes. There was not a man who had an overcoat or gloves. Their collars were turned up and they were shivering in the cold. They had been there since 6 o'clock in the morning. It was really a pathetic sight. It is the rule to find a line like that there now every morning. Sometimes 200 men come and wait their turn in line. I was glad to see that the city authorities, two years later, established as a memorial of the Mayor, Mr. Harrison, their own free baths.

THE CHAIRMAN—Were your baths entirely free?

DR. KELLOGG—Yes sir, entirely free; we are still carrying it on. We find the men are still ever ready to patronize these baths. I think it is a means of free grace that is better than preaching.

Another thing I have noticed, in studying this question, is that those people who give attention to public cleanliness, are the most advanced in civilization. To illustrate that, I remember an anecdote that I heard at the expense of Spain. An Englishman was traveling in Spain some time ago. He went to a hotel and called for a bath. The proprietor was astonished, and could not fully understand what was wanted. Finally the traveler learned that his host did not possess such a thing as a tub. After considerable delay he brought two large butcher's trays, and the traveler was enabled to take his bath, presenting the appearance of a miniature Colossus of Rhodes. The result was that the water leaked through the floor upon the people below, which caused the traveler considerable trouble.

I think what is called bogus Christianity is chargeable with the degeneration of the baths. One of the first things the Christians did in Rome was to try to tear down the baths and convert them into unnecessary churches. You will find in Rome at the present time scarcely such a thing as a public bath, only two or three floating arrangements, but several hundred unnecessary churches. They have been built almost entirely from unused public baths. The baths have been torn down and to day serve as churches or convents.

I was reading regarding one of the early fathers who was supposed to be very eminent in piety and canonized because of his little regard of appearances. He was filthy and had three hundred patches on his pantaloons, and was canonized because it was believed that the purest souls were found in the dirtiest bodies. What this country needs is the promulgation of the gospel of life, and I do not know of anything more conducive to pure minds than ample facilities for personal cleanliness. The Turkish bath is one of the best ways by which it can be promulgated.

A celebrated doctor in Vienna called attention to the fact that a hot, followed by a cold, shower bath caused the blood corpuscles to be increased in number from 35 to nearly 50 per cent. That seems unreasonable, but I have repeated his experiments, and while I have found no instance in which the increase was so great as 50 per cent., I have frequently found an increase of from 10 to 20 per cent. But that is considerable when we have an area of nearly two thousand square yards in the body.

I think we must consider this bath as one of great value. It is not that the corpuscles are originated, but simply brought out of their lurking places. They accumulate in the spleen, viscera and liver, whereas by the circulation they are brought into the stream of the blood, whereas before they were stagnating. So that the Turkish bath becomes the means of increasing the general vitality, and at the same time preserves the corpuscles from destruction. I do not think anything can be of greater benefit than the Turkish bath.

MASSAGE IN CASE OF APPENDICITIS.

Read before the Scandinavian Society of Teachers of Gymnastics, Stockholm.[1]

BY ASLEY LEVIN, M.D.

All authors on internal medicine whom I have studied on this subject (Niemeyer, Eichhorst, Strümpell, Kunze, etc.) regard it unanimously to be the first rule in the treatment of appendicitis, to let

[1] Translated by Hugo Oldenborg, Central Music Hall, Chicago.

the patient have complete immobilily, not even allowing examination with palpation. In all the papers on gymnastics which I have perused, I have not found a single word mentioning the benefit or even the possibility of a gymnastic treatment for the disease in question. As far as I know, the only publication on the subject to be found is in the report from the Swedish Medical Congress in Norrköping, 1887, where Dr. A. Wide reports about four cases which he has treated. During the last years some masseurs have made use of massage in this disease, regarding the treatment as often very serviceable, although always more or less dangerous. I wish to present my experience on the subject. It may first be necessary to distinguish the meaning of the word appendicitis.

Authors on medicine speak of three different diseases, all of which may be included under the name of appendicitis. They are typhlitis, perityphlitis, and paratyphlitis. Typhlitis is an inflammation of the intestinal wall; perityphlitis of its serous membrane, and paratyphlitis means an inflammation of the porous connective tissue behind the appendix, between that and the rear abdominal wall. The difference between these three is often difficult to determine, especially as they often pass into each other and may be found simultaneously.

The disease usually commences as a typhlitis or a perityphlitis and may remain in this stage, or later on develop into paratyphlitis. During the course of the disease we can plainly distinguish two stages. The first stage, the acute, is characterized by fever, pain and great soreness. The second begins when the fever has subsided, the pain decreased and the bowels moved. The most marked symptom is soreness, localized in a circumscribed place. It is observed when the patient makes a stronger contraction of the muscles of the abdomen or of the lower extremities. It is also felt on pressure.

The treatment is quite different during the different stages. In the acute stage complete immobility, ice, opium, etc., are prescribed, and only in the second stage of the disease has massage, as far as I know, been applied by some masseurs.

In the manual method of treatment the rule is, and in some respects even more than when treating the disease by medicines, *tentare licet* (hasten slowly). Without trying something new, without testing the adaptability of the method on new regions of the body, we would here, no more than elsewhere, not be able to make any progress. Furthermore, with the means which one has, literally speaking, in one's own hand, there is less danger attached to experimentation than with many other methods. All of us have been happy to witness how the therapeutic gymnastics continually enlarges its field of work and takes possession of additional diseases for treatment. May I then be permitted to describe the method I have followed, and which may be an example of many other methods that are pursued by other masseurs.

Case 1.—A man, 40 years of age, who was treated by me in 1884. Seven years previously he had suffered from appendicitis, having had fourteen relapses, several of which were quite serious. Seven or eight months have intervened since the last attack. The patient consulted me for a stubborn constipation, which had followed as a result of the disease, and probably the constipation was the cause of the many relapses. There was also a moderate soreness in the fossa ileo-cecalis. I started the treatment with much cautiousness and a feeling of respect for the dreaded disease. The treatment consisted of bowel-massage, given in the beginning with great precaution, on the right side; but as the soreness gradually disappeared the strength of the treatment was increased, and finally all the soreness having gone, this side was especially worked upon. The stools became more and more regular, and there was no need of any more treatment. The patient had then been treated during four or five months. Perhaps the function of the intestines varied after that and occasionally required repeated treatment, but in the mean time there has been an absence of relapses. The last effect of the treatment was, so to say, added to the bargain, because it was not expected from the beginning, as I could hardly have hoped to obtain such a result.

Case 2.—Encouraged by the result secured in the first case, I eagerly started in with my second case in 1885. Mrs. K., of 20 and some years, was taken ill with appendicitis (typhlitis, peri- and paratyphlitis) after a cold. She was attended by a colleague here, and after consultation with him I commenced the treatment about five weeks after the disease had set in, and three weeks after the patient had left the bed. There still remained a rather considerable resistancy along the cecum with moderate soreness, except on one single spot, the size of a finger tip, located about the middle between the navel and the right anterior superior spine of the ilium, which point was very sore. The treatment now consisted of gentle massage of the resistant part, avoiding the tender spot. After a couple of months there was nothing to be found of the resistancy. The circumscribed soreness, however, still remained, although it had somewhat decreased in severity. The stools were always normal.

These two cases are to be regarded only as results from the appendicitis, or, at least, as such cases in which the acute stage has already passed. All of the cases treated by other masseurs have been similar.

Case 3.—Contemporary with the above mentioned case, I received a third one for treatment. The patient was a man, 37 years old, who accidentally slipped down on his right leg from the last step of a staircase, and landed on the heel with straight knee. He felt a sudden pain in the right side of his abdomen, and eight days later noticed soreness in the side. On the eleventh or twelfth day I was called and found the patient suffering from pains and great soreness over the lower part of the right side of the abdomen. Constipation had been present for three days, and there was slight fever. The usual treatment was carried out, immobility, ice and opium. The pains soon subsided; the soreness disappeared, and the temperature became normal. On the ninth day I tried to effect evacuation by means of an injection, but did not succeed. I ordered another injection for the evening and returned the following day in company with a colleague. No stools. Two great injections did not have any effect, but as there was no soreness I gave a common bowel-kneeding, beginning with great care, but by and by, as no pain was felt and gases began to leave the patient, a matter that had not occurred before, I increased the vigor of the treatment. The patient soon felt an inclination to move the bowels, and a small injection had the desired effect. As the patient lived some six miles distant from me out in the country, I was only able to treat him irregularly with massage during one month. The soreness in his right side disappeared, however, entirely during this time; the stools became normal, and since then he has had no relapses.

In this case the treatment was begun nearer the acute stage; but all fever having disappeared and the soreness already much reduced, we considered the acute stage as being passed, although the patient had not yet had any stools, when the treatment was started.

During the winter 1887 I spent a month in London in order to pursue at the very place the so much spoken of "method" of Mr. G. H. Kellgren. In my opinion it does not decidedly differ from the method of Ling, upon which method it was admitted to have been based; but in some cases it was carried out quite differently. For instance, a couple of manipulations were used, already mentioned by Ling, and also in our gymnastic institutes. Kellgren, however, practiced them a good deal more and had technically improved them. These were nerve-friction (our nerve pressure) and vibration (a very slight and fine shaking or trembling motion). Beside that, the whole gymnastic treatment was given during a much

longer time and with more energy than is generally the case here.

The above mentioned manipulations were also used in several acute diseases, such as fevers, etc., which generally have been regarded as unsuitable for mechano-therapeutics. I am sorry to say I had not the opportunity of following up such a case, but judging by from what I heard and regarding the splendid technique that was displayed and which I also tried to practically learn, I decided to try this kind of treatment as soon as an opportunity presented itself. I thought especially of the appendicitis which Kellgren said he had treated during the acute stage and with good results.

Case 4.—It was not before 1888 that I had an opportunity of trying the method on a more acute case. It was when the same lady whom I had treated before (Case 2) had a relapse. I started treatment on the fourth day, while there was still a great deal of soreness and fever (38 to 39 degrees C.) existed. It consisted then of extremely fine vibrations just over the most sore place. I argued like this: Here is a stasis; if I were now able to produce a motion which on one side is strong enough to cause an excitation of the debilitated tissues, especially in the vessels, but, on the other hand, is not so vigorous as to tear possibly existing adhesions, the effects must be beneficial. I regarded the vibrations to be such movements, if they were carried out, that the trembling of the arm and hand is transferred to the underlying parts without so great a motion being produced, that no rubbing or dislodgment of adjacent tissues could take place. I would not, even now, begin the very first day. The treatment with ice and opium was resorted to as before. The exceedingly sore abdomen could not only stand my treatment, but the patient felt relieved; it had even a soothing effect upon her. The first day the treatment only lasted for five minutes; the second it was increased to fifteen and it then relieved the pain and decreased the pressure in the abdomen by causing gases to escape for the first time. So also the following day and when on the seventh the fever had disappeared and an injection of water was given with good result, the attack was over. Massage and vibrations were then continued. One week later all resistancy was gone, but the old sore point still remained.

Case 5.—In the summer of the same year, 1888, there came to the watering place of Bie, a 17 year girl, Miss A. In the spring of 1887 she had a slight attack in the ileo-cecal region, which, however, by her physician was not regarded as a real inflammation, until the patient in the spring of 1888 had a strongly marked appendicitis, leaving a soreness in a small place, also the one localized about midway between the navel and spine of the ilium, anterior superior dextra. There were also found so-called cellulites (infiltrations) in the subcutaneous connective tissues of the abdomen, which possibly started after the long lasting cold compressions that were used during the attack in the spring. There was no resistancy to be observed except in the sore spot, the size of a finger tip. The treatment consisted of general abdominal massage, directed partly against the subcutaneous infiltrations, partly against the slowly acting intestines, and especially against the sore point. The patient was getting along all right, when one day I saw her in a running race down a long steep hill. Being below, I immediately stopped her, but it was too late. The following morning I received notice that she had been taken ill during the night with pains in the right side and very much increased soreness, slight aching, but no fever. The patient, as well as her mother, who was along with her, were convinced that it was a relapse, because the previous attack had begun under the very same circumstances and with the same symptoms. Treatment was immediately commenced, and as the usual massage could by no means be endured, I resorted to vibrations during half an hour and repeated this treatment twice the same day with a constant diminution of the pain. There was slight fever in the evening. The following morning no fever was present; the pain had nearly disappeared, and the soreness decreased. After the first treatment this day the patient felt entirely well and wanted to leave the bed. She remained in bed that day, however, received one more treatment, and felt completely well the next day. The massage treatment was continued with the result that the patient did not feel anything but a little soreness on pressure at the above mentioned point.

In December of the same year she came back again in order to get this soreness, which had now somewhat increased, worked away. I had hardly treated the patient a week before she happened to slip on the floor and fell, and, as she expressed it, sprained her right side. She immediately felt pain again in the old place. The pain and soreness increased, so that at my visit the following day they were pretty severe and did not permit of the usual kind of massage. I took up the vibrations at once and after half an hour of treatment the pain disappeared, and the soreness was not worse than before. The following day the condition was as usual. After that, I treated the patient occasionally without being able to entirely remove the soreness in the above mentioned point.

Case 6.—The same year I had at the Central Gymnastic Institute another patient with recurrent appendicitis. Miss T. was 19 years of age. She suffered in February, 1886, from appendicitis. In May, the same year she had a relapse after an improvement. Since that time she has had soreness in the ileo-cecal region, which later spread over the groin and the whole hip, with pain in the small of the back and the whole right leg, attended with increased difficulty in walking. Nov. 22, 1888, she came to me for treatment at the Central Gymnastic Institute. During the first month her condition was unchanged, with considerable pain in the small of her back, right hip and groin, and a great deal of hardship in walking. Great soreness in the ileo-cecal region, with the resistancy spreading in the right side of the abdomen. During the stop at Christmas time the patient had a relapse without known cause, Jan. 9, 1889. I was called the 10th, when the patient had pain in her right side which had considerably increased in severity, accompanied with soreness and slight fever (38 to 39 degrees C.). I immediately gave the treatment with vibrations and afterward ordered ice and morphin. The treatment was repeated two or three times this day, also the following day for from fifteen to twenty minutes each time. As the patient felt greatly relieved and pain and soreness had materially decreased after every treatment, ice, as well as morphin, was discontinued after the second day. On the 15th the temperature was normal; an injection was given with the desired result. A couple of days later she was up, and after a fortnight more she appeared again at the Institute, to which place she had quite a distance to walk. This case showed what a different effect the treatment has when the vibrations are properly given. As my time in the beginning of the term was so much occupied that I could not possibly visit the patient more than once a day, I desired to let some of the pupils from the Institute (now in their second year) try the treatment in such a delicate case. Consequently I let the pupil which had previously treated the patient at the Institute, who had given very good movements, and when giving the abdominal massage to the patient (which she had done for a month previously) displayed marked ability in moderating the strength of the movements, again accompany me and give treatment with vibrations. The patient, however, had marked soreness during the whole treatment which lasted quite a while after the treatment was discontinued. Treatment was again tried, but with the same result. My own treatment gave, as before, relief. I did not dare let this pupil continue the treatment, but took another, whom I had found previously to give the best vibrations, although she had not before treated this patient, and had not even had a case resembling it. Her treatment was tolerated very well from the start and afforded relief. I might remark here that the patient did not like to change the masseuse she once had become accustomed to. When she returned to the Institute she was treated once daily with massage and light passive movements. As the soreness passed away the strength of the movements was increased, with the result that when the patient stopped May 15, the soreness was very nearly gone, and the resistancy could hardly be felt. She could walk without any trouble, and her bowels moved regularly, daily. Since that time she has had no relapse.

Case 7.—Mrs. D., 33 years of age, came April 1, 1889, to the Central Gymnastic Institute. She had had perityphlitis December, 1883, a relapse during the summer, 1884, since which time there was soreness in the right side. The patient felt "tired and weak"; the slightest exertion produced additional soreness and even pain for a couple of days. She suffered from another relapse in January, 1889. During the last two weeks she has been treated with massage by a colleague in this city and has improved. Now she gave evidence of slight pain, a great deal of soreness on pressure in the cecal region, especially at a point a little below the middle between the navel and the right superior spine of the ilium; pain in the sore region when bending or turning the trunk; also in case of longer and more rapid walks. Stools fairly regular. After a month of treatment with massage and light movements, her strength was considerably increased; there was no pain experienced

while walking or in moving the body. The soreness on pressure remained, though very slight. Her bowles moved regularly.

Case 8.—In April, 1889, Mrs. Y. (See cases 2 and 4) had another relapse. This time, as before, she suddenly complained of pain and great soreness which came on at once; later a high fever developed (38.3 to 40.1 C.). The same colleague was called who treated her before and the treatment consisted of ice, morphin and opium. I began the following day to give vibrations and my colleague, who had been very doubtful as to the benefit of this treatment, had to acknowledge its good effect. It gave more relief than the ice. The treatment was given twice a day, and at the end of seven days the attack subsided. The after-treatment, which was continued for some time, could not even now remove the soreness in the old place.

Case 9.—In October of the same year another relapse occurred in the same patient, which was just as sudden and severe. This time I had the opportunity of giving two treatments the first day, which afforded so much relief that neither ice nor opium was used. The temperature ranged from 38 to 39 degrees C.

A brother of Director Kellgren in London, Dr. Arvid Kellgren (also from London), who happened to be in the city, was kind enough, at my request, to accompany me the following day and give the treatment, which in manner was the same as I had previously given, but in execution undoubtedly much better, as his technique was exceptionally good. After his first treatment, which was kept up for half an hour, the pain decreased very much. We then both continued the treatment for half an hour each daily until the fifth day, when the patient was able to leave the bed. After that I gave a long after treatment, following which she felt less of her sore spot than ever after the first attack. But the soreness did not disappear entirely. This lady was pregnant in 1887 and 1888 which condition normally progressed without any influence upon the soreness in her right side. During none of the relapses was there any soreness to be found in the pelvic regions, which were always examined.

My opinion as to the use of therapeutic gymnastics in the treatment of the above-mentioned disease, judging from the experience I have had, and what I have found out from other masseurs, is that the indications are quite different in different stages of the disease. My opinion is decided about the later stage, the so-called "after stage," which, as above mentioned, has hitherto been the only stage where mechano-therapeutics have been used. I regard the treatment in this stage, as a rule, both useful and beneficial. The anatomic alterations consist in most cases of effects that are left after the inflammation has subsided. These effects consist sometimes of adhesion between the cecum and the surrounding tissues, as the abdominal wall, other intestines, etc., resulting from the inflammation of the serous membrane of the intestine. It is very natural that in proportion to the degree that these adhesions are short and broad, they will obstruct and limit the peristaltic action and to the same degree, when they are lengthened, this hindrance will decrease. A strong bowel kneading which will make the intestines move about each other, helps to extend and lengthen those adhesions, without tearing the intestinal walls, because of the now well organized condition of the results of the inflammation. Such a movement must consequently be very beneficial and there is no reason to suspect any danger.

Another effect depending upon the inflammatory process in the intestinal wall is a remaining edema, which renders the intestinal wall thicker, its muscles less powerful, and consequently the whole action of the intestine is lessened. From this there results an inclination for constipation, and the constipation on its side is generally the cause of the relapse. It is, of course, analogous to the effect of the kneading upon any other part of the body, that the direct kneading of the intestine will promote the circulation, remove the products of the disease, and consequently bring the tissues back to their normal stage. If there are no other changes in the intestinal wall we can not suppose that such a kneading would be of any danger. Had there been paratyphlitis, that is, an exudation of pus behind the cecum, the amount of pus would regulate our action. If the amount is rather limited, an infiltration, it is often absorbed without any interference from the outside. Careful massage or, perhaps better, vibrations will then increase the tissues' power of resorption, distribute the pus, and prevent it from accumulating and forming an abscess. If, on the other hand, the amount of pus is so great that an abscess really exists there, it is very doubtful if any kind of manual treatment would be beneficial. It might be a source of danger in producing a rupture and, above all, we can sometimes do more harm than good by this kind of treatment, by deferring what in such a case would be more beneficial—a surgical operation.

In still other cases (cases of real typhlitis) a sore may be developed in the intestinal wall and perforation thus threatened. Such cases are frequent when the disease begins in the vermiform appendix. In most cases such a perforation is prevented by a previously circumscribed peritonitis which solders the threatened place together with the adjacent part of the peritoneum. In this way an adhesion will be developed, which will always be in great danger of breaking before the intestinal wall has healed up again.

All manual treatment during this stage is, of course, dangerous and as the benefit it might produce in promoting resorption does not exceed the danger to which we subject the patient, we must say that this kind of treatment under such circumstances is decidedly contraindicated. If pus is encapsulated somewhere we must think of the possibility that by manipulating the same we might cause an acute inflammation, which will be followed by perforation.

With reference to the acute stage, our experience as yet is so little regarding the treatment, that we would hardly dare pronounce an opinion. So much might be said, however, that the treatment seems to give the patient relief without causing any annoyance or danger; so consequently we are justified in continuing the experiments, observing the greatest caution and possessing as complete a knowledge as possible about the case. It is not advisable for any masseur to try such treatment without being closely controlled by a physician.

In case of relapse I regard it of great benefit to immediately make use of the treatment, because we might be able to abort the attacks in some cases, a matter which, will always be difficult to prove.

Finally, I would again call attention to the fact that the manner in which the movement is given is of the greatest importance, and should be given in such a manner that the hand of the masseur will not injure, but rather have a decidedly beneficial effect. Any other movement would really do harm. Only a good operator in consultation with an expert diagnostician ought to try the manual method of treatment. In

the same degree as more practitioners try this method, our experience will be proportionately increased, and then I hope better methods will be devised and more decided indications given.

ENCHONDROSIS.

Read by Title in the Section on Surgery at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY MERRILL RICKETTS, PH.B., M.D.
CINCINNATI, OHIO.

While this disease is one of the rarest affecting the human skeleton, it has many interesting features and causes. The literature pertaining to it is indeed scarce, but few cases being reported, and those by Berg of Stockholm within the last year.

The principal causes assigned in the twenty-one cases referred to were syphilis, tuberculosis, typhoid

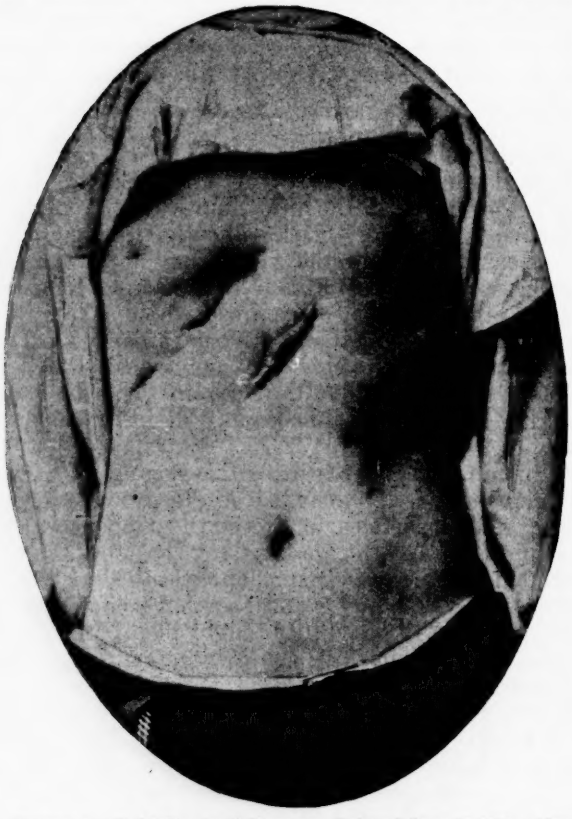

FIGURE 1.—H. McK. Aged 37 years. Injured June 29, 1895. Abscess spon. Opening Sept. 29, 1895. October 19, curetted. November 1, removed two inches seventh cartilage. December 1 curetted sternum and removed part of cartilage of seventh, eighth and ninth. February 4, removed part of cartilage of seventh, eighth and ninth cartilage. March 11, 1896, removed cartilage and three-quarters of an inch of bone of the sixth, seventh, eighth, ninth and tenth; also curetted sternum and removed double pedunculated flap from left side to cover entire granulating surface. Recovery. "Traumatic chondritis."

fever and trauma. When once the cartilage becomes diseased there seems to be no remedy but complete removal and also a portion of its bony attachment.

The accompanying report of a case of traumatic enchondrosis illustrates the amount of destruction which may result from an injury to the perichondrium: H. M., age 37, white, American, received an injury to the right seventh costal cartilage on June 7, 1895. An indurated mass appeared about one and a half inches to the right of the median line over the seventh costal cartilage. An abscess appeared which was opened on the 20th day of September following; this continued to discharge pus until October 19, when he was brought to my office by Dr. J. K. Brammer, his attending physician. Cocain was injected and an incision made about two and a half inches long. It was found that the cartilage was diseased, necessitating a thorough curetting. He returned November 1, no improvement having taken place. Two inches of the seventh cartilage was removed at this time. On December 1 the sternum was thoroughly curetted and a portion of the seventh, eighth and ninth cartilages removed. Still there was no improvement, the disease gradually extending. Feb. 4, 1896, another portion of the seventh, eighth and ninth cartilages on the left side, allowing the space from which it was taken to granulate. A drainage tube was passed beneath the entire flap. He made a rapid and uninterrupted recovery and is now able to perform work of any kind.

In conclusion I would offer the following suggestions:

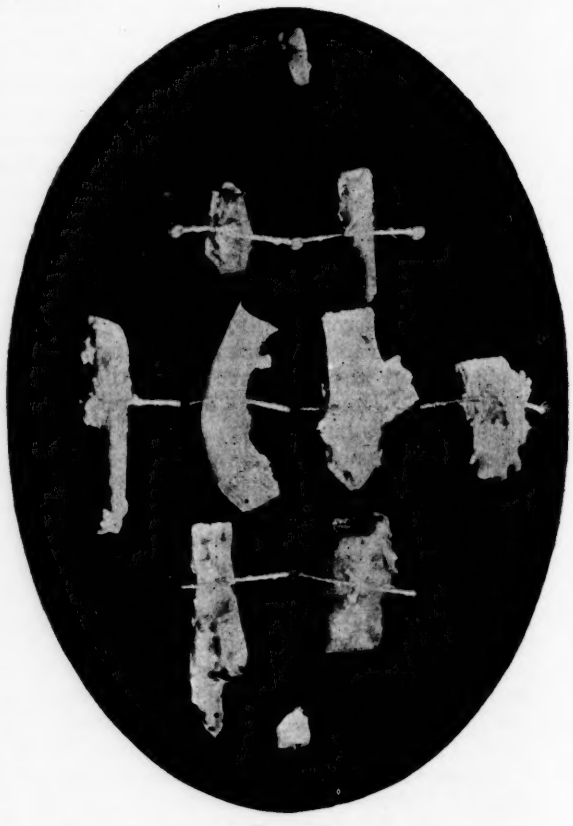

FIGURE 2.

1. None but the most radical operations should be made at the onset of the disease.
2. At least one half inch of the bony attachment of the cartilages should be removed.
3. Great care should be exercised to prevent puncturing the pleura.
4. Surgical anesthesia should always be resorted to, as it is difficult to determine the extent of the disease before operating.
5. If the sternum be diseased a portion of the normal should be removed with the diseased tissue.
6. Unless bone is removed with the cartilages, the wound should be allowed to heal by granulation and not by flaps, as fistulæ indicate the diseased tissue.
7. Flaps should be resorted to when possible.
8. There is no evidence that medication is of any avail.

The Trinidad, 415 Broadway.

REPORT OF FIVE HUNDRED CASES OF INTUBATION OF THE LARYNX.

Read before the Colorado State Medical Society, June 17, 1896.

BY F. E. WAXHAM, M.D.

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DENVER, COLO.

It has been my pleasure to have reported, on a previous occasion, 466 cases of intubation. To this number I can now add 37, making a total of 503. Of these thirty-seven cases there were seventeen recoveries, or 46.64 per cent. Many of these cases were beyond all hope when the operation was performed. Several were complicated with scarlet fever and some with measles, and in these cases the operation was simply performed for euthanasia, much to the detriment of a good record. In nine cases antitoxin was administered with six recoveries, or 66.66 per cent. In order to complete the record I desire to publish the following cases:

Case 467.—Diphtheria of pharynx and larynx; age 6 years. Wore tube seven days; complete recovery.

Case 468.—Diphtheria of nasal cavities, pharynx and larynx; age 18 months; patient died within thirty-six hours.

Case 469.—A case of malignant diphtheria with larynx involved. Great relief from dyspnea afforded by the operation, but patient died within twenty-four hours from exhaustion; age 7 years.

Case 470.—Semi-malignant diphtheria of nasal cavities, pharynx and larynx; patient died three days after the operation from exhaustion; age 3 years.

Case 471.—The case was considered to be one of membranous croup, as no membrane was visible in nasal cavities or pharynx. Patient wore tube nine days, making a good recovery; age 3 years; other children in the family developed pharyngeal diphtheria.

Case 472.—Patient died on third day after operation from extension of membrane to the finer bronchi; age 4 years.

Case 473.—Diphtheria of nasal cavities, pharynx and larynx; wore tube ten days; complete recovery; age 16 months.

Case 474.—Patient dying from suffocation when operation was performed; wore the tube four days; perfect recovery; age 20 months.

Case 475.—A case of laryngeal obstruction complicating measles. Operation gave relief to the urgent dyspnea, but patient died from exhaustion within twenty-four hours; age 20 months.

Case 476.—A case of laryngeal diphtheria. Operation gave relief for twenty-four hours, when obstruction occurred below the tube which could not be expelled on removal of the tube. Tracheotomy was done and a membranous cast of trachea and larger bronchial tubes was removed. Patient died forty-eight hours later from bronchial obstruction due to the reformation and extension of the membrane. Age 13 years.

Case 477.—Diphtheria of pharynx and larynx; wore tube four days; uneventful recovery; age 3 years.

Case 478.—A bad case of diphtheria involving the larynx; wore the tube ten days before it could be dispensed with. General paralysis occurred, involving muscles of throat; necessary to feed through stomach tube; slow but complete recovery; age 3 years.

Case 479.—Operation gave relief, but patient died twenty-four hours later from extension of membrane. Age 5 years.

Case 480.—Operation gave relief for forty-eight hours, when obstruction occurred below the tube. The tube was removed, but the patient was unable to expel the offending membrane and immediately became asphyxiated. Tracheotomy was quickly done after respiration had ceased and the patient resuscitated. A membranous cast of trachea and bronchial tubes was removed. The case did well for thirty-six hours, when reformation and extension of the membrane occurred and the patient died; age 5 years.

Case 481.—A case of malignant diphtheria terminating fatally twenty-four hours after operation; age 3 years.

Case 482.—A sister of the previous case; malignant and fatal within twenty-four hours; age 4 years.

Case 483.—Diphtheritic case; wore tube four days; recovery; age 4 years.

Case 484.—Wore tube five days; recovery; age 3 years.

Case 485.—Diphtheritic; died three days after operation from extension of membrane to the finer bronchi; age 11 mos.

Case 486.—Wore tube five days; uneventful recovery; age 8 years.

Case 487.—A diphtheritic case; prompt relief was given, but case terminated fatally within thirty-six hours from extension of membrane; age 12 years.

Case 488.—The case was one of edema of the larynx associated with very severe form of scarlet fever. The patient died from edema of the lungs within twenty-four hours after the operation; age 17 years.

Case 489.—A case of scarlet fever attended with laryngeal obstruction. The case was hopeless when operated upon and died within twenty-four hours; age 3 years.

Case 490.—Wore the tube six days; uneventful recovery; age 5 years.

Case 491.—Wore tube six days; antitoxin administered; good recovery, although slow; a secondary attack of pharyngeal diphtheria occurring within three weeks; age 3 years.

Case 492.—Wore the tube nine days, making a good recovery; age 7 years.

Case 493.—Patient very low with scarlet fever accompanied with laryngeal obstruction. There was but little relief from the operation and the child died within a few hours; age 2½ years.

Case 494.—The patient was very feeble and died within thirty-six hours; age 3 years.

Case 495.—Antitoxin used; patient nearly moribund from asphyxiation; wore the tube four days; recovery.

Case 496.—Patient died within twenty-four hours after the operation; age 3 years.

Case 497.—Diphtheritic case; patient greatly exhausted from difficulty of respiration; antitoxin employed; wore tube five days; good recovery; age 2 years.

Case 498.—Wore tube nine days before it could be dispensed with; antitoxin used; recovery; age 3 years.

Case 499.—A very bad diphtheritic case; patient nearly dead and lower trachea and bronchial tubes already invaded; intubation gave no relief on account of obstruction in trachea and bronchial tubes which could not be expelled; tracheotomy performed and patient died within twenty-four hours; age 2 years.

Case 500.—A bad diphtheritic case, nose, throat and larynx being involved; four other bad cases of diphtheria in the family; antitoxin used; wore tube five days; recovery; age 2 years.

Case 501.—A case of pharyngeal and laryngeal diphtheria and patient greatly exhausted from long continued dyspnea; antitoxin used; wore tube five days; recovery; age 3 years.

Case 502.—A case of laryngeal diphtheria, no membrane being visible in pharynx; child suffering from intense dyspnea; case terminated fatally within thirty-six hours from extension of membrane; age 7 years.

Case 503.—The patient did well for four days, when the tube was removed. Within a few hours the stenosis returned and before reaching the patient death had occurred from suffocation; antitoxin used; age 3 years.

In conclusion, arranging my cases in series of 100 consecutive cases the record to date is as follows:

FIRST ONE HUNDRED CASES.

Age.	No. Cases.	Recoveries.	Percentage.
Under 1 year	5	1	20.00
1 year	13	2	15.38
2 "	22	4	18.18
3 "	17	2	17.76
4 "	15	7	46.66
5 "	9	3	33.33
6 "	5	2	40.00
7 "	8	2	25.00
8 "	4	3	75.00
9 "	1	1	100.00
10 "	1	0	00.00
Total	100	27	27.00

SECOND ONE HUNDRED CASES.

1 year	17	5	29.41
2 years	15	2	13.33
3 "	14	4	28.56
4 "	22	7	31.81
5 "	9	6	66.66
6 "	8	3	37.50
7 "	6	4	66.66
8 "	1	1	100.00
9 "	3	2	66.60
10 "	1	0	00.00
12 "	2	0	00.00
13 "	0	0	00.00
14 "	0	0	00.00
Total	100	34	34.00

THIRD ONE HUNDRED CASES.

Under 1 year	5	2	40.00
1 year	11	2	18.18
2 years	13	5	38.46
3 "	19	11	57.72
4 "	22	9	40.90
5 "	10	5	50.00
6 "	7	1	14.28
7 "	6	3	50.00
8 "	2	0	00
9 "	2	0	00
10 "	1	1	100.00
20 "	1	0	00
43 "	1	1	100.00
Total	100	40	40.00

FOURTH ONE HUNDRED CASES.

Under 1 year	2	1	50.00
1 year	11	3	27.27
2 years	20	7	35.00
3 "	19	10	52 63
4 "	20	7	35.00
5 "	11	4	36.36
6 "	5	1	20.00
7 "	5	1	20.00
8 "	3	2	66.66
10 "	2	1	50.00
11 "	1	1	100.00
60 "	1	0	00
Total	100	38	38.00

LAST ONE HUNDRED AND THREE CASES.

Under 1 year	2	0	00
1 year	14	3	21.42
2 years	16	10	62.50
3 "	29	11	37.93
4 "	14	6	42.85
5 "	7	2	28.56
6 "	2	1	50.00
7 "	7	1	14.28
8 "	4	3	75.00
9 "	1	0	00
10 "	2	1	50.00
12 "	2	0	00
13 "	1	0	00
17 "	1	0	00
36 "	1	1	100.00
Total	103	39	38.83

TOTAL NUMBER OF CASES.

Under 1 year	15	4	26.66
1 year	76	16	21.05
2 years	97	35	36.08
3 "	114	43	37.89
4 "	104	41	39.42
5 "	50	21	42.00
6 "	28	8	28.57
7 "	36	11	30.55
8 "	17	11	64.70
9 "	8	3	37.50
10 "	9	4	33.33
11 "	1	1	100 00
12 "	5	0	00
13 "	2	0	00
14 "	1	0	00
17 "	1	0	00
20 "	1	0	00
36 "	1	1	100.00
43 "	1	0	00
60 "	1	0	00
Total	503	178	35.38

I can not close this paper without emphasizing the importance of the use of antitoxin in cases of laryngeal diphtheria. I am fully convinced that antitoxin limits the extension of diphtheritic exudation as does no other remedy that we possess and as the danger lies chiefly in the extension of this membrane it is apparent that the remedy should be employed early before the membrane has extended to the lower trachea and to the bronchial tubes. In a case of diphtheria, the very moment that it is evident from the slightly embarrassed respiration and croupy cough, that the larynx has become invaded the remedy should be used. By the early use of antitoxin in these cases not only will many operations be avoided but many cases requiring operation will be saved that would otherwise perish. In corroboration of this statement I would say that since the general use of this remedy in Denver I have been called much less frequently by my *confrères* to operate than formerly, and in those cases operated upon a much larger percentage have been saved.

THE EMINENTLY SCIENTIFIC NATURE OF OUR PATENT AND COPYRIGHT LAWS.

THE KLEBS ANTIPHTHISIN CASE.

BY F. E. STEWART, M.D., PH.G.
DETROIT, MICH.

For the purpose of promoting progress in science and the useful arts the Constitution of the United States gives Congress the power to grant to authors and inventors for limited times the exclusive use of their respective writings and discoveries. On the clause in the Constitution referred to, our patent and copyright laws are based. The question at issue is the right to copy. The copy right law refers to the right to copy the writings of others; while the patent laws refer to the right to copy the inventions of others. Now I propose to show that it is just as equitable for the medical profession to endorse the patent as applied to medicine, as it is to endorse the copyright as applied to literature. At the same time I hope to make it clear that so-called "Patent" medicine business is a misnomer; and I hope to show that what is generally known as the "Proprietary" medicine business possesses no property in medicines whatever, and is a misnomer likewise.

All will admit that the promotion of science and the useful arts is of great benefit to society at large, and any fair minded man will agree that capital invested in business should be properly protected. If, therefore, there is a law which will protect both science and commerce at the same time such a law must be truly beneficent. Such exists in our patent law, which, if properly applied is capable of effecting that most desirable end.

"A patent is a contract between the inventor and the government representing the public at large. The consideration moving from the inventor is the production of a new and useful thing, and the giving to the public a full knowledge thereof by means of a proper application for a patent, whereby the public is enabled to practice the invention when the patent expires. The consideration moving from the government is the grant of an exclusive right for a limited time, and this grant the government protects and enforces through its courts." Simond's Manual of Patent Law, p. 11.

The patent office at Washington is a great bureau of archives representing progress in science and the arts in the United States. Any one who wishes to post himself in regard to inventions in any special line of work can obtain full knowledge of everything patented in that line by applying at the patent office. Models, drawings, descriptions, working formulas, are all there for inspection; and he can secure, at small cost, copies if he so desire.

Many useful arts of the ancients have been lost to the world for lack of publication which would have been preserved if patent laws similar to those devised by our law makers had been in force. The necessity of securing the publication of the art of manufacture of every medicine must be apparent to every one. In case of a *patented* medicine such publication is secured. Moreover, the inventor, to whom the world is indebted for the discovery of a new and useful thing receives well merited reward for his labor.

The patent law provides "That any person who has invented or discovered any new and useful art,

machine, manufacture, or composition of matter, or any new and useful improvement thereof, not known or used by others in this country, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, and not in public use or on sale for more than two years prior to his application, unless the same is proved to have been abandoned, may upon payment of the duty required by law, and other due proceedings had, obtain a patent therefor." Sect. 24, Act of July 8, 1870.

It may be observed, first, that an invention for which a patent is sought must be original with the applicant; second, it must be new and useful; third, full knowledge of it must be filed at the patent office; fourth, the grant is limited to a term of years at the end of which the monoply ceases, and the invention becomes common property.

If all these requirements are not complied with the patent is invalid, even if granted, and the courts owe it to the public not to protect inventions when the demands of the patent law are ignored. Now I contend that the enforcement of these demands, when patents for medicines are applied for, would do much to correct the abuses which are throwing our laws into disrepute in their relation to medicinal preparations.

The inventions specified as patentable are:

1. An art or an improvement of an art.
2. A machine or an improvement of a machine.
3. A manufacture or an improvement of a manufacture.
4. A composition of matter or an improvement thereof.

To define what constitutes a new art, machine or manufacture, or an improvement thereof is sometimes a difficult task. But it is far more difficult for courts to define what constitutes new and useful compositions of matter or compositions thereof. The law requires that an invention to be patentable, must be "*new* and *useful*." To define what are new and useful compositions of matter may require the most profound knowledge of chemistry; and when referred to therapeutic inventions, a score of expert physicians and chemists might be required to settle it. Yet patents have been granted without any attempt being made worthy of the name to ascertain whether the alleged inventions conformed to the demands of the patent law or not. More care should be taken to carry out the wise provisions of the Constitution in this connection, so that the patent law shall promote and not hinder progress in the science of therapy and pharmacy. Surely no patents should be granted for medical compounds unless the applications are first submitted to a commission of physicians and chemists to pass thereon; and the courts should not attempt to decide questions of infringement without first consulting such a commission.

Another point of great importance in the application of patent law to medicine is the question of naming new compositions of matter. Mistaking the nature of the patent privilege some inventors have registered the names of their inventions as trademarks for the purpose of continuing the monopoly after the patents expire, and thereby defeating the patent law. Now it is cerainly true that if the only name by which a compound is known may be legally used as a trade mark, it is equally true that its use as a trade mark may be continued indefinitely after the patent has expired, so that the trade mark law may render the patent law ineffective so far as promoting progress in science and the arts is concerned. But when the patent expires the article, according to the contract between the inventor and the government, becomes common property. Surely, under the contract, it is not fair to permit the inventor to exercise a perpetual control over the name of the article and thus exclude the public from an equal chance in its manufacture and sale. Moreover, the name by use becomes descriptive of the article, and it is an axiom of law that a descriptive name can not be made a trade mark.

Mr. George H. Lothrop of Detroit, one of the most eminent patent lawyers in America, in a conversation recently used an illustration which seems to make clear the absurdity of claiming the only name of an article as a trade mark. He said: "When a baby is born into the world, a name is given it. Does the name of the baby belong to the baby or to the one who gave the baby its name?" Every new thing born into the world must have a name; and that name belongs to the thing, not to the one who named it. While the patent is in force the use of the name is restricted to the patentee along with the invention, but when the patent expires both should, and I hold that they do, become common property.

Now, as we have no law in this country granting the exclusive use of articles of trade to individuals except the patent law, and as every article not patented in which the world is trading is free to the public to manufacture and sell, it follows that there is no property in a medicine unless it is patented. The majority of medicinal compounds on the market are not patented. The reasons for this are various. First, only a few of them are patentable, being mere aggregations of old and well-known drugs. Next, the manufacturers had rather rely on secrecy and semi-secrecy for protection than expose their trade secrets by an application for a patent. Then the monopoly permitted by the patent law is limited, and it is possible to monopolize a medicinal compound indefinitely by secrecy as to its true or working formula. But it is hardly a correct definition to call these unpatented compounds proprietary medicines, for it inculcates the idea that there is property in them (which there is not), and that any one except the introducer who may desire to manufacture and sell them is guilty of piracy. As well might every manufacturer of pens, ink, paper, silk and woolen goods, and of every article of commerce not patented be called a pirate. Competition is the life of trade, and it is this mistaken idea that every manufacturer of unpatented articles except the introducers are pirates, imitators and infringers of the rights of others that is throttling the entire manufacturing interests of the United States as far as medicine is concerned.

If the medical profession and the pharmacists of this country would combine on this one thing and demand that every medicinal composition shall be published and provided with a name under which it may be manufactured and sold by all, it would do more than anything else to blot out that great misnomer, the so-called "patent medicine" business. It is a wise and just policy that rewards the inventor of a new and useful composition of matter with a patent. But let no patents be granted for medicines unless there are reasonable grounds for believing that they are new and useful inventions, and then see to it that the scientific and beneficent ends of the patent law

are carried into practice. The protection of labels' trade marks and packages is indispensable to the existence of trade and a great protection to the public, but let it be known that there is no legal warrant in the use of the only name of an article as a trade mark. Such a use of it creates a perpetual monopoly, protects secrecy, kills all competition and is an open door to fraud.

Another very important point in this connection is the right possessed by the government representing the public at large to refuse a patent to an inventor when public policy demands it. The granting of a patent that will hinder progress in science and useful arts is contrary to the policy of the patent law. "The policy of the patent law is, primarily, a selfish one on the part of the public, and only secondarily intended for the benefit of inventors, and then as a means to an end only." Simond's Manual. The same author states that the United States Supreme Court has, twice at least, decided that a principle can not be patented, "and this in one instance when one of the most important of all inventions of all ages was under consideration—that of the electric telegraph." The Government thought that by giving the inventor a monopoly it would delay the development of that most useful discovery, and so refused the application. In the same manner the government has a right to refuse a patent upon a chemical, such as *phenacetin*, for example. A patent on a process or machinery for making the chemical might not be objectionable, but the granting of a patent upon the chemical itself, and thus cutting off all opportunity for developing new and improved methods for its production does not seem wise public policy and compatible with the end in view, viz., the promotion of progress in science and the arts. Especially does the policy seem a foolish one when the manufacture of the chemical is conducted in Germany, and results in the enrichment of a foreign corporation. Still more foolish does it seem when it is considered that Germany will grant no such privileges to American inventors manufacturing in this country and exporting to Germany. But the height of unfairness is reached when our laws are so construed that *phenacetin* is protected in this country so that it costs at wholesale $16 a pound, when, according to the *Chemist and Druggist*, it can be purchased under its chemical name (paraacetphenetidin) in England for about $1.25 per pound.

Now for the practical application of all this to the "Antiphthisin" case. Dr. C. P. Ambler, Associate Medical Director and Laryngologist, Winyah Sanitarium, Ashville, N. C., an institution where that preparation is being exploited, asked the privilege of reading a paper on the subject of "Antiphthisin" before the Section on Materia Medica, Pharmacy and Therapeutics of the AMERICAN MEDICAL ASSOCIATION. As chairman of the Section I gave my consent. This I was justified in doing, as "Antiphthisin" is the invention of the famous scientist, Klebs, of Klebs-Löffler bacillus fame, and Prof. Klebs was present in person to discuss the subject. In the discussion it developed that the product known as "Antiphthisin" is patented in Germany and a patent applied for it in this country. The name "Antiphthisin" is also registered as a trade mark in the Patent Office at Washington. "Antiphthisin" will not be made in this country, but will bear a stamp "Made in Germany." As the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION forbids physicians prescribing patented medicines it is not surprising that there were members present who seriously objected to permitting Dr. Ambler's paper to go unchallenged. Accordingly a resolution was passed and referred to the Business Committee of the ASSOCIATION in condemnation of "Antiphthisin." The Business Committee is composed of conservative gentlemen who will doubtless decide the question on its merits, yet it would be a very unfair thing to affix any serious penalty on Dr. Ambler for reading his paper, or to take any action under the circumstances that might injure the good name and reputation of Dr. Klebs.

When it is considered that probably 25 per cent. of the medicines prescribed by the members of the AMERICAN MEDICAL ASSOCIATION are claimed as proprietary by their manufacturers is it any wonder that Dr. Klebs considered the rule against proprietary medicines of no binding force, even if he knew of its existence? Was it any more objectionable for Dr. Ambler to read a paper before the Section on "Antiphthisin" than it would have been if he had made the subject "The Comparative Merits of *Phenacetin*, *Antipyrin* and *Salol*"? All these substances are patented, and their names are registered as trade marks.

Now is the time for the AMERICAN MEDICAL ASSOCIATION to take definite action in relation to the subject of patented medicines. Something must be done. The ASSOCIATION will not be satisfied with any compromise measures. The patenting of medicines is right or it is wrong. Personally I believe it is right if the scientific demands of the patent law are complied with. Now that the matter is brought clearly before the ASSOCIATION by the Klebs case let the matter be carefully considered, and acted on in a manner fair to all concerned. If the Code is to be sustained in this instance then let it be enforced all along the line and dismiss every member of the ASSOCIATION who prescribes *phenacetin*, *antipyrin* and *salol*. The Code can not be enforced in this matter. What then shall we do? Shall we indorse the use of patented medicines without qualification, and thereby indorse the nostrum trade *in toto*, to the utter ruin of scientific pharmacy? Shall we repudiate those manufacturing houses who have sacrificed many opportunities of making money by standing by the profession and throw our influence in favor of those who leave no stone unturned to throw the profession into disrepute by advertising to cure incurable diseases and jeering at the medical profession because of its admitted impotence in such cases? These are serious questions that demand an answer and the nostrum trade will not be slow to seize the opportunity to use it for the advancement of the nostrum business unless we answer these questions in such a manner that it will leave no doubt in the minds of the public in regard to our true position. We can not afford to fight the patent law, founded as it is on the Constitution of the United States, as it is eminently scientific and just, but we can demand that it shall be so enforced as to promote progress in the science of medicine and the useful arts of pharmacy and therapy, and not be a hinderance to all progress by patenting principles, protecting secrecy, killing competition and throttling trade under the guise of law.

Ichthyol in Orchitis.—Dr. Leedom Sharp recommends enveloping the inflamed testicle and cord in a 30 per cent. ichthyol ointment.—*Univ. Med. Mag.*, August.

A CASE OF SUPPURATING MASTOIDITIS CURED WITHOUT CHISELING.

BY ALFRED HINDE, M.D.

SENIOR SURGEON EYE AND EAR DEPARTMENT, CENTRAL FREE DISPENSARY; OPHTHALMOLOGIST TO THE NEUROLOGIC CLINIC IN RUSH MEDICAL COLLEGE.

CHICAGO, ILL.

N. McG., a robust Irish girl aged 17, about ten days in the United States, applied on May 8, 1891, for treatment on account of a severe earache of the right ear that had commenced twenty-four hours before and had become progressively worse since its onset. She gave a history of "catching cold" about three weeks previously, adding to it during the voyage across the Atlantic and on the cars to Chicago. On examination marked tenderness was elicited on pressure over the tragus and downward behind the ramus as far as the angle of the inferior maxilla. The drum membrane was intensely reddened, thickened, and its landmarks buried. The adjacent soft parts of the external auditory canal were swollen and injected, especially those of upper posterior wall. The mucous membrane of the nasal cavities was hypertrophic, and it and that of the naso-pharynx was still inflamed and discharging. The Eustachian openings were red and swollen. The ear disease was evidently an extension of the naso-pharyngeal catarrh, and the grade of the inflammation was such that an accumulation of pus was expected in the tympanum as soon as sufficient time had elapsed for its formation. The symptomatic treatment consisted in syringing with hot boric acid solution in large amount, and in a continuous stream into the external auditory canal; hot fomentations of the same solution applied to the region of the affected ear. In the absence of leeches, a fly blister was applied over the tragus. Saline derivatives to move the bowels were advised, and for the usually increased nocturnal pain pills of camphor and opium were ordered to be taken one every four hours as needed. Nasal cleansing with warm salt solution was ordered. The nose and naso-pharynx were daily sprayed with Dobell's solution and an eucalyptol-menthol-vaselin mixture. Beside every second day, after cleansing the naso-pharynx, a dram solution of nitrate of silver to the ounce was applied. Gentle inflation of the Eustachian tube was resorted to after a few days.

Ear pain continued, deafness increased, and a profuse serum-like discharge appeared at the external meatus; then the sufferings ceased. The discharge became muco-purulent and lastly purulent and lessened in amount under the above treatment, and the perforation of the drum-membrane decreased in size. The membrana flaccida was now seen to be bulging and of yellowish-red color and on this, the thirteenth day of the disease, it was freely opened under cocain, but the pain produced by its incision was so severe that the patient did not return for treatment for sixteen days following. During the latter time no treatment was had. She returned, however, with a complete relapse of all the inflammatory ear symptoms and a slight ear discharge. Beside, there was some headache on the right side, and slight tenderness on firm pressure over the right mastoid.

A free incision of the membrana tympani was advised, and a crucial incision was made in its posterior half and much sanguinous pus was evacuated, and a thorough cleansing, with the peroxid of hydrogen and the other solutions, was resorted to. At this period of the disease the Eustachian tube could not be opened by any means whatever. The urgent symptoms decreased rapidly and the case did well for eight days, when another relapse occurred.

The patient became pale and looked sick, the ear discharge continued, the headache and mastoid tenderness returned and increased. A slight edema and redness of the soft parts over the mastoid appeared and a Wilde's incision was suggested but objected to, so that the foregoing treatment was continued. The symptoms increased in severity. The mastoid tissues became more swollen and painful and pyrexia (101 degrees F.) supervened, upon which latter quinin had little effect. She sickened still further and was unable to attend to her domestic duties. During two days she vomited at intervals and was nauseated all the time, and could not eat or sleep. An incision of the mastoid process was urged, but permission was only given to cut through the soft tissues and this was done freely, close to the pinna, through the periosteum, and an inch in length. A small amount of thick, creamy pus was evacuated from beneath the edematous tissues, the wound was irrigated, and the bone was found to be sound and without any opening into it, and permission to open it was positively refused by the patient and her friends. The drum membrane was again incised and the parts thoroughly irrigated. After this the symptoms rapidly decreased and the patient was quite comfortable again for a week. The mastoid swelling and tenderness disappeared so long as the wound remained open, but when it had almost closed she again became ill with a complete recurrence of all the ear, mastoid, head and stomach symptoms and fever. An opening into the affected mastoid was urgently advised but more positively refused. A second incision through the soft tissues over the mastoid was done and a slight amount of pus again let out. The bone was not osteo-porotic but perfectly healthy. No sinus was visible in the exposed field, but after a protracted search in all possible directions with a No. 6 Bowman's probe the latter sunk into the bone through a normal canal to the depth of three-quarters of an inch, and in the upper posterior part of the mastoid process. The incision through the soft parts was now made to expose this opening into the bone. The bone was laid bare and found to be perfectly normal, and undoubtedly the passage-way was a physiologic canal giving exit most probably to an emissary mastoidal vein (the emissarium mastoideum of Santorini). The membrana tympani was again freely incised. Into the newly found opening in the mastoid was inserted the tip of a finely-pointed, tightly-tied medicine dropper whose point diameter was one-sixteenth of an inch. It snugly fitted the entrance and through it was injected a dropper full of sterilized water—the drum perforation being watched at the same time—and pus was seen to ooze from the tympanum into the external auditory canal as the water disappeared from the large bulb of the medicine dropper under extreme pressure into the mastoid cavity.

This was repeated until the external auditory canal was filled with a watery pus and the patient felt fluid running into the throat and coughed it out. An open way was thus demonstrated between the mastoid process and the tympanum and through the Eustachian tube, and seeing that we had no choice, we decided to try and drain the abscess through existent openings. Irrigation was continued until clear water escaped from the ear. The relief of symptoms was almost

immediate and the patient slept well the first night and next day was much improved in appearance, and said she felt almost well—the head and stomach symptoms were all gone. The ear was discharging freely, and we injected a solution of peroxid of hydrogen and watched the bubbles escape through the perforated drum membrame, and the entire external canal became filled with the same, and the patient coughed the froth out of her throat and blew it out of her nose. Afterward a one-half per cent. warm solution of carbolic acid was injected and last of all an alcoholic solution of boric acid was used and the latter caused considerable temporary pain. The mastoid wound was dressed in the usual way and the nose and throat treatment was continued. So rapid and marked an improvement resulted from the daily treatments that at the end of four days the ear discharge had almost ceased and what little was still present was thin, pale and watery, and seen only in the neighborhood of the perforation in the drum membrane. At the end of one week from the initial injection of the mastoid a mere speck of watery moisture at the site of the drum perforation was mopped up on cotton, and on examination, per microscope, was seen to consist of detritus, with a few granular, breaking down, and fissured pus cells. Ear treatment was now discontinued. A plug of cotton was kept in the external auditory canal, and the mastoidal wound was allowed to close. In another week the tympanic perforation and the wound of the mastoid had healed and the case was dismissed with the request that the nasal douchings be continued. The cure was complete, and it proved to be permanent as no relapse has since occurred. One year later the hearing distance for the watch was 11-40, whereas for the left ear it was 40-40, and the tuning fork was heard in all positions, better in the right ear. In all, the diseased process had lasted about fifty-eight days in the right ear, but a complete and thorough drainage and antisepsis of the infected cavities had been instituted for only four to seven days before a perfect and permanent cure resulted. This is the indication in all suppurative processes, but it is notably difficult to accomplish in aural surgery without opening up freely the suppurating cavities. This case shows, however, that, even as dangerous as conservative surgery is in such ominous cases, very occasionally a cure may result from simple methods.

16 Laflin Street, Chicago, Ill.

THE CHURCH OF ROME AND THE LEPERS OF COLOMBIA.

BY ALBERT S. ASHMEAD, M.D.

NEW YORK.

I send you an appeal of the order of St. Lazarus for help to the unfortunate lepers of Colombia. Formerly the grand master of this order had to be a leper himself. His Grace, the Archbishop of New York, informs me that this manner of qualification for the grandmastership was abolished by the Holy See in 1253.

LECTURE.

Lecture given by the Reverend Father (Salesian) Evasio Rabagliati, in the Solemn Session of the Society of St. Lazarus (Bogota, Colombia) on July 7, 1895. (Exordio—Et occurrerunt ei decem viri leprosi, qui steterunt a longe et levaiverunt vocem suam dicentes: Jesu preceptor, miserere nostri—and there met him ten men that were lepers, which stood afar off; and they lifted up their voice and said: "Jesus, Master, have mercy on us.")[1]

The first thing we should observe in this story is the great and exquisite kindness of Jesus, etc. . .

Brethren, not far from here, not one, not ten, lepers lift their voices, there are many more. In Agua de Dios there are 850, in Contratacion (Santander) I left, a few months ago, 700 and more; and all these lift their voices, in order that you may hear them. And what do they say? What is their plea? The same as that of the gospel, *miserere nostri*, have pity on us. . . .

Until to-day, according to data gathered in a private manner, I believed that the number of lepers of Colombia did not exceed 15,000 or 16,000. Now, I see that I was mistaken. Before I ascended this pulpit one of our physicians, Dr. Carlos E. Putnam, member of the Academy of Medicine, Bogota, assured me that I was; for he, after asking from all the departments the precise number of the patients, obtained this result: That the number of lepers in the whole Republic of Colombia on July 6, 1895, amounts to 27,250! Is there an error in this account? Who knows? For my part, I will admit an exaggeration; I will suppose that there is an error in the figures; I will try to believe that the number does not reach 20,000, even less; that there are not more than 15,000. Do you think that if we can abate a few thousands of the official account, this is an argument that ought to quiet us? Even thus, do you not believe that the calamity is great, and that the consequences for the future would be serious and baneful. . . . . .

During fifteen years which I passed in the Argentine Republic, in Uruguay and in Chili, I did not see one leper. If anyone should take the time and patience to gather precise data on this subject, "Leprosy in the World," the result would be, that the Republic of Colombia alone has more people attacked by leprosy in its different manifestations than all the other nations of the universe. Really such a thing is amazing and terrible. . . . Let us ask the men of science, the physicians; they all, unanimously, will tell us that the principal causes of this disease are heredity and contagion. As to heredity, there is not the least doubt; the Lazarinos themselves acknowledge that either the children or the grandchildren inherit the disease; the germ remains. Who is able to say what enormous proportions the disease must assume through this cause? As to the contagiousness, not being competent I shall give no opinion. All the Lazarinos say that the disease is not contagious. Almost all the physicians say that it is; and I have said almost all because in the medical congress held at Bogota about two years ago, of more than one hundred physicians called upon to give an opinion on the matter, only two said, No. All the others answered in the affirmative. Who was mistaken? The two or the ninety-eight? But I give my opinion, whatever its value. I believe there are climates unfavorable to the disease, and that others favor it. In the first place there will be no contagion, or it will be very slight; in the other case there will

[1] And it came to pass, as he went to Jerusalem, that he passed through the midst of Samaria and Galilee. And as he entered into a certain village, there met him ten men that were lepers, which stood afar off. And they lifted up their voices and said: "Jesus, Master, have mercy on us." And when he saw them, he said unto them: "Go show yourselves unto the priests." And it came to pass that as they went they were cleansed. And one of them when he saw that he was healed turned back, and with a loud voice glorified God. And fell down on his face at his feet, giving him thanks; and he was a Samaritan. And Jesus answering, said: "Were there not ten cleansed, but where are the nine? There are not found that returned to give glory to God save this stranger." And he said unto him: "Arise, go thy way, thy faith hath made thee whole." St. Luke, xvii: 11-19.

be contagion and it will manifest itself rapidly and energetically. . . . . .

One fact most evident is that the evil increases every year. In the year 1888, according to the statistics of the Lazarinos of the Department of Santander, which were made conscientiously by one of the most distinguished physicians of that Department, the number of patients in that year did not reach 1,500; in October of the next year, I think, I met from 5,000 to 6,000; I have since heard from persons of competent authority that I had been very much mistaken, for in the department in question there are not less than 10,000 lepers. There is another fact which is evident. A few years ago this disease was totally unknown in Antioquia; now it is frequently seen there. In the Cauca we hear the same story; the number of the lepers can not be very small, when we consider that the authorities of that department have decided to establish a lazaretto for their exclusive use. . . . Allow me to speak with entire frankness. The public in general believe that isolation exists, because we have a large lazaretto a few leagues from the capital, in Agua de Dios, and another lazaretto in Santander. That is true; but these lazarettos have only the name of a hospital, and I may say without the least exaggeration there might be written over the entrance of both, "Fabrication of Lazarines." I can tell you, even now, that in both these leper houses the healthy are much more numerous than the diseased; two healthy ones to one sick; this is the proportion of the population of the lazarettos. But what are the healthy people doing there? Some, the smaller number, probably attend to the patients; it is the healthy daughter who accompanies and attends her mother, or *vice versa*; it is a brother, some relative who does not want to forsake a sick brother or relative; to that there is nothing to say, it is a laudable act of charity which these healthy persons are performing, and God will not leave this work of love without reward. But, on the other hand, there are other healthy persons, the greater number, probably, who are there for other reasons. Some for the purpose of doing business, others with the infamous object of exploiting the poor lepers. On this subject, I have been told in the Lazaretto of Contratacion of incidents that were really scandalous. Moreover, in both lazarettos he enters who will, and remains as long as he likes; he may even establish his residence there if the whim takes him to do so, without anyone having the right to interfere. . . . The attendants are generally healthy persons, who have to live in intimate contact with the diseased, eat at the same table, perhaps from the same plate, sleep under the same roof, use the same garments. . . . . .

And now, tell me frankly your opinion, are these lazarettos just as we see them, places of danger, or are they not? You must consider, that from these houses the lepers may go to other places and establish themselves in the villages with the greatest facility. Any pretext is good; if there is none, one is invented. It is not the President of the Republic who gives these permissions, not even the alcalde of Tocaima, which is the nearest place to the lazaretto. They may be given simply by the administrator or a person delegated for that purpose. . . . . .

We recognize the necessity for a large and unique lazaretto; but where? The prospect of the island of Coiba, in the Pacific ocean, as a place of isolation has entirely failed for many reasons; and the most forcible of these, in my opinion, was the obstinate resistance of the lepers. They have told me over and over again, on all occasions, "We shall flee to the woods, Father, we shall hide in the mountain caves, we prefer starving here; but to the island we shall not go." I have consulted reliable persons on this matter, and they have pointed out to me the plains of Casanare, or of San Martin. The idea of taking Casanare could not be considered, because it is a region very little adapted; 1, because these plains have a large population; 2, because the inundations are frequent during many months of the year. In San Martin it is very different; the rivers are not so numerous nor so rapid; we can find with exceptionably favorable conditions, a great plain, surrounded by the Meta and Nare Rivers, which form a very beautiful peninsula several leagues in extent, the elevation rendering flooding impossible, however rainy the winter may be; and it has other advantages not necessary to enumerate here. As to population we may say it has none; it is a desert pure and simple. . . . . .

The successor of Don Bosco, the present superior of the Salesian order, Don Miguel Rua, long ago solemnly promised the representative of Colombia in Rome, the most excellent Dr. D. Joaquin Vélez, to send as many monks to Colombia as was necessary to execute this project. In one of his last letters, dated from Bogota, he approved and blessed it and encouraged us to begin to execute that great idea. The friend and father of the Lazarines, Father Miguel Unia, also approved the project, and thinks it feasible; he, who is speaking to you, has received from his superiors of Turin all the means necessary to consecrate himslf exclusively to this mission, and after the feasts of Our Lady of Carmen he will be entirely at the disposition of the public. He will fulfill his promise and begin his journey from place to place through the whole extent of the republic to ask for the mite of Colombian charity; if this shall be the decision of this conference. I wish before starting, to speak to you again; in order to further elucidate these ideas, and answer the objections which may be made. In the meanwhile, to the intelligent, distinguished and charitable people of the capital, I intrust the project. To all, without distinction of opinion, either religious or political, I recommend it most seriously; study it, discuss it, amend it also, if you see fit. What is important to all is to arrive at satisfactory and feasible solution. Especially do I intrust it to you, men of science and of arts, to the physicians and publicists; adopt this project, make it your own, and let your valuable opinion be spread to the last confines of the republic, in order to fill with hope the heart of all lepers, and with charity and generosity the hearts of all Colombians.

My last word is for you, virtuous and devoted Sisters of the Society of San Lazaro. May God bless you for all the good you have done during the four years of existence of your beloved society. Forward, with perseverance, you have done much; but there remains immeasurably more to do; enlarge the sphere of your activity, increase your ranks; every Colombian whose heart beats with love of religion and fatherland must enter them. Your work is a work of redemption above all others. Do not be discouraged by the difficulties which you will meet; remember that every great and holy work must bear the seal divine, the seal of contradiction and struggle. Once passed through the crucible, the work will prosper

and triumph. God certainly has blessed and is blessing us now, for his Vicar on earth, the Sovereign Pontiff Leo XIII, has blessed you and blesses you now. You find the proof of that in the treasure of indulgences, partial and plenary, which he sent you last year. Be ye all enthusiastic propagandists for the project which I have announced; and with your fervent and constant prayers help the work which we undertake.

In the name of God, in the name of your wards, the lepers of Agua de Dios, in the name of religion and fatherland, I send you the most sincere thanks. And for all you have done, and all you may do in the future, all the glory will be solely for God and the salvation of souls.

Ad Majorem Dei Gloriam. I have said.

PASTORAL.

We, Bernardo Herrera Restrepo, by the grace of God and of the Holy Apostolic See, Archbishop of Bogota, to the clergy and to the faithful of the Archdiocese:

All the good sons of Colombia who are animated with Christian charity toward their fellow men, are deeply concerned by the sad situation in which are placed so many of our brethren, who suffer this terrible disease of leprosy and its painful and inevitable consequences of isolation and perhaps of abandonment and utter want.

The church could not do less than take part in that general solicitude; and, therefore, if in other times and in similar circumstances, men especially called to help the poor diseased arose from among her ministers, now, too, by means of the sons of Don Bosco,[2] she gives examples of love for the unfortunate lepers. They with the spirit of sacrifice which is above all praise, live among these unfortunates, nursing them as a father would, and offering them in life and death the consolations of religion.

Now the great work of the founding of the national lazaretto having been begun with the object of insuring to the lepers habitation and means of subsistence to make their lives less bitter and of opposing the spread of the contagion, the Salesian Fathers will announce and propagate this grand work in the whole republic. With that object, the Reverend Father Evasio Rabagliati prepares to journey about in the republic in order to persuade all to coöperate according to their means and to contribute with their alms and voluntary donations.

It is our duty to support this holy and charitable enterprise; and for that purpose, we appeal to the clergy and to the people of the republic, and especially of the city of the archdiocese entrusted to us, and we request everyone to give a hearing to the Christian sentiments of his heart, and to contribute as largely as he can to the founding of the national lazaretto, delivering into the hands of the Rev. Father D. Evasio Rabagliati the alms which he destines for that purpose.

Our Lord, God, will reward all those who help in this work of Christian love which we recommend; they will return an hundred-fold to the giver the goods which will be offered for the relief of those who cry like Job:[3] "Have pity upon me, have pity upon me, O ye, my friends; for the hand of God hath touched me."

This pastoral shall be read twice in all the churches in the archdiocese. Given in Bogota, Aug. 4, 1895.

BERNARDO,
SALUSTIANO GÓMEZ RIAÑO, Archbishop of Bogota.
Canonical Secretary.

[2] Brothers of the White Frock.
[3] Job xix, 21.

CONGENITAL ABSENCE OF THE ESOPHAGUS.

BY DANIEL LICHTY, M.D.
MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.
ROCKFORD, ILL.

A writer in a late issue of the JOURNAL, in an article on a subject remote from this, made the statement that "malformations of the *internal* organs of the fetus are still more rare than the various orthopedic lesions of the exterior body." In confirmation of this, a case of the above title came to my notice, whose rarity then impressed me, and it is here given to add to the peculiarities and mysteries of tissue growth in pre-natal life. If those who have the Index Medicus can find similar cases recorded in it, it would be interesting to know of them.

There was born in Rockford Hospital July 24, 1895, after a quite natural and easy labor, of a healthy Swedish mother aged 25, her third child, a male weighing six and three-fourths pounds, well formed and fully developed in all its external parts. After birth there was some of the obstructive mucous respiration often observed, which usually passes away after wiping the mouth, a drink of water, inverting the child and such like procedure. In this case, however, it persisted from day to day; it could nurse and seemingly swallow. There was nasal regurgitation, though the hard and soft palate and pharynx were perfectly normal; the gurgling respiration continued in spite of all efforts to relieve it, and on the eighth day the child died of inanition.

The privilege of a postmortem examination was obtained from the grieved but sensible parents. Exploration began by removing the sternum, dissecting through the thyroid isthmus, exposing and inspecting the larynx and trachea, which were each found normal except being filled with the ingested milk; a soft catheter was passed into the pharynx and esophagus which met obstruction that resisted further advance. Deeper dissection brought to light the esophagus ending in a distinct cul-de-sac, in which the tip of the catheter was engaged at the second dorsal vertebra. The lumen of the gullet was normal to this abrupt terminal, being about one centimeter in diameter, easily admitting a No. 12 catheter. Two centimeters below this and a little to the left, as would follow the normal course of the esophagus, began a fibrous impermeable cord one millimeter in diameter, very gradually increasing in size, in its passage through the diaphragm, until the natural dilatation of the stomach was attained, where its permeability was reëstablished, and the remainder of the alimentary tract was of normal form and function throughout. No other malformation was discovered.

Minnesota Coroner's Fees.—Where the coroner on the same day makes two separate examinations of two different dead bodies, or holds an inquest on one body and makes an examination of the other, the supreme court of Minnesota holds, in Kistler vs. Board of Commissioners of Hennepin County, decided June 24, 1896, that, under section 5554, General Statutes 1894, he is not entitled to a fee of five dollars for each examination and each inquest, or to anything more than five dollars per day "for the time actually spent."

SOCIETY PROCEEDINGS.

British Medical Association.

Sixty-fourth Annual Meeting held at Carlisle, Eng., July 28–31, 1896, under the Presidency of William Barnes, M.D., F.R.C.S., J.P., of Carlisle.

(*Continued from page 378.*)

[Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

Dr. W. F. ROBERTSON, of Edinburgh, gave in the Section on Psychology, a microscopic demonstration upon the pathology of hematoma auris. The sections illustrated the various stages of the degenerated lesion in the ear cartilage, which, as had already been contended by Fischer, Pareidt and others, prepared the way for the occurrence of the hemorrhage. Typically this took place from new vessels in the wall of an intra-cartilaginous cyst. It was shown that these vessels were specially prone to a degenerative change, which must render them liable to rupture from slight violence, or even spontaneously. The blood was slowly effused into the cyst, which tended gradually to enlarge by separation of the perichondrium.

In the same section, Dr. A. Robertson of Glasgow read a paper on "The Treatment of Mental and Nervous Diseases by Animal Extracts." He first drew attention to other special methods of treatment which he had used in his practice, before considering the group of therapeutic agents which were the subject of the paper. These special methods were:

1. Heat and cold to the head at graduated temperatures. In some cases of insanity recovery was at least largely due to this mode of treatment.

2. Mechanical stimulation of the brain and membranes by percussion of the skull. This has conduced to the recovery of some patients.

3. By electrization of the brain through the medulla. One electrode passed along the floor of the nostril, rests on the cervical spine, the other is moved slowly over the convexity of the head. He had not yet used it in the insane, but is now recording a case of diabetes insipidus cured under this mode of application.

4. Psychical, combined emotion and suggestion. The rapid recovery of a patient after mental shock is referred to, and the fact that it has been tried by the writer as a mode of treatment is mentioned.

5. Hypnotism should not be discarded. Its power over the nervous system is illustrated by the intermediate and confirmed recovery of a patient recently in the Royal Infirmary suffering from hemianesthesia, after other treatment had failed.

He then proceeded to record his experience with organic extracts, and also his impressions of their value. He had made observations on the effects of the following preparations: The fresh brain of the sheep; cerebrinin, an extract of the cortex; thyroid extract; Brown-Séquard's testicular liquid; the thymus gland. These preparations were then discussed in their order.

The author closed with the remark, that in the thyroid and cerebral extracts, as well as the other special methods of treatment referred to at the outset, we have additional remedial measures, and it is the duty of the physician in charge of the insane to have recourse to them in suitable cases.

Dr. RUTHERFORD MACPHAIL made some remarks on

POST-INFLUENZA INSANITY.

In which he presented an analysis of twenty cases admitted under his care into the Derby Borough Asylum in the five years ending Dec. 31, 1895. He included only cases among the recent admissions whose insanity was attributed to influenza, or who were reported to have had an attack of influenza a few months previously. This represented 4.8 per cent. of the admissions.

Of the twenty cases, nine were men and eleven women. The youngest patient was a lad aged 18, the oldest a man aged 71. The average ages were, for men, 37.6; for women 39.2. The largest number of cases (eight) occurred in the fifth decade. Hereditary predisposition to insanity was admitted in six of the twenty cases. In all except two the attack of insanity was an initial one. As to the form of mental disease, melancholia occurred in the cases of three men and seven women, mania in five men and four women, and one man was a general paralytic. Fifty per cent. of the cases were therefore melancholics, a larger proportion of melancholia than usual, for the records of the asylum during the five years in question show only a percentage of twenty melancholics to all admissions. The type of melancholia varied from simple depression to the acute forms, with well-marked delusions. The delusions most common in the maniacal cases were those of suspicion and of poisoning. Four of the cases were actively suicidal and had made attempts on their lives at home.

The results were as follows: Among the men, four recovered, two were relieved, one died and two are still under treatment and are chronic. Of the women, eight recovered, one died and two have become chronic. All the melancholics recovered except one woman who died. The average residence in the asylum of those who recovered was three months for men and four months for women. These numbers are too small to permit of any definite conclusions, and accordingly no attempt was made to dogmatize. It was, however, worthy of note that in the cases under review the average percentage of recoveries to the total admissions was higher than usually obtains in public asylums, while the average period of asylum residence was considerably lower.

In the section on public medicine Mr. GORDON SHARP, of Leeds, contributed a paper entitled:

THE SOIL IN RELATION TO DIPHTHERIA AND ITS ORGANISM.

He drew the following conclusions:

1. Diphtheria would appear to be endemic in certain districts. Soils organically laden are dangerous, but much may depend on the nature of the subsoil. Where the subsoil is porous a neighborhood may be free. Where the subsoil is impervious the surface at certain seasons of the year may be a favorable breeding ground.

2. I think I am justified in deducing that soils which would otherwise be sources of the spread of diphtheria are rendered innocuous by deep drainage.

3. The presence of a large quantity of air in the surface soil appears to be salutary and the contrary holds. However, this may be an accidental circumstance.

The close connection between enteric fever, scarlatina and diphtheria has often been remarked, and Bond has especially called attention to the close relationship between scarlatina and diphtheria, and formerly the connection seems to have been even more marked. Thorne has called attention to the fact that as authorities have improved their water supply, enteric fever has declined in frequency, while under the same conditions and with improved sewerage systems diphtheria has increased. Immersion in water for a short time seems fatal to the microbe of diphtheria, while the contrary holds with regard to the organism of enteric fever; both seem to live in sewage. A moist rather than a water-laden soil seems to be the home of the organism of diphtheria.

Mr. JAMES NIVEN, of Manchester, followed with a contribution entitled:

THE PUBLIC HEALTH ASPECTS OF TUBERCULOUS DISEASES.

He said that preventive action in this affection should take something like the following shape:

1. Information as to the precautions needed to be taken should be distributed to every home from time to time, until a sufficient body of opinion was created on the subject.

2. Tuberculosis, attended with discharge, should be made a notifiable disease. This would entail additions to the sanitary staff, including probably a qualified medical assistant. The objects of notification would be: (1) To gather precise clinical knowledge as to the various conditions under which individuals contract tuberculosis. During such an inquiry in Oldham in 1889 I found that more than half the deaths from tuberculosis investigated were of people who had previously been in intimate and prolonged intercourse with previous cases. (2) To ascertain and remove insanitary conditions about the house as speedily as possible, so as to give a chance to the patient of recovery, and so as to diminish the risk to the other members of the household. (3) To distribute printed information on the preventive measures required, and to bring about an understanding with medical practitioners as to their giving systematic personal instruction to the patient and attendant.

3. Hospitals for consumptives are at present foci whence a practical knowledge of preventive measures radiates. It may be doubted whether the time is rife for the establishment of such hospitals at the public expense. If this becomes possible, such hospitals would greatly aid in reducing the amount of infective material in circulation.

4. To prevent the milk from tuberculous cows remaining the source of danger which it now is we require a systematic examination of in all cowsheds by competent veterinary inspectors. Two assistant veterinary surgeons have recently been appointed in Manchester for this purpose, and already five cows have been slaughtered as tuberculous and found to be so. This appointment is one which I have had much at heart. The milk of suspected cows will also be examined bacteriologically where the grounds for condemnation are otherwise not perfectly clear. The veterinary surgeon is now authorized by the corporation to examine suspicious cows with tuberculin. Under new reg-

ulations an effort will be made to bring the cowsheds into a tolerably sanitary condition—at least those which can be so amended. If the cowsheds are cleansed with water twice a day and the cows kept clean, and if in addition the cowsheds are kept well lighted and well ventilated, then there will not be much risk of infection between cows and human beings or from cow to cow.

5. All meat and pork should be thoroughly examined; hence no meat should be taken direct from a private slaughterhouse for sale. The presence of tuberculous glands in meat or pork should suffice to condemn it. In the case of animals killed at the public abattoir this criterion is not required. It is the more necessary that it should be rigorously applied in other cases.

6. Cats certainly, and fowls possibly, are a serious source of danger. More attention should be given to the diseases of which cats have died—and, indeed, the cause of death of all our domestic animals should be fully investigated.

DR. F. A. DIXEY of Oxford, read an interesting paper on

VITAL STATISTICS OF DIPHTHERIA IN LONDON.

The most interesting question in the paper was that of the effect of the antitoxin treatment of this affection. On this point the general conclusion reached by the author in a former paper was fully maintained, and he asserted that the diphtheria mortality of the metropolis had received a considerable check which it was difficult to attribute to any other cause than the introduction of the serum treatment. We quote *verbatim* from the paper the following:

"Comparing together the average weekly number of deaths for the last five years, we find that after rising from 26.2 in 1891 to 36.2 in 1892 and 62.8 in 1893, it fell to 51.4 in 1894 and 44.5 in 1895. It is true that the opening months of 1895 promised a greater diminution than that exhibited by the figures for the whole year, and that the intensity of the rise last autumn seems to show that some other factor than the antitoxin treatment must have been concerned in the diminished mortality at the end of 1894; but notwithstanding these facts, which are freely admitted, it would seem that the general run even of these figures suggests a conclusion favorable to the efficacy of the treatment. This conclusion becomes strengthened if, in place of the actual number of deaths, we consider what is of course a truer test of the matter at issue—namely, the case mortality, or relation of deaths to notifications. Under this head the main facts are as follows: The number of cases notified during 1893 was 13,694; of deaths during the same year 3,264; giving a case mortality of 23.8 per cent. In 1894 the corresponding figures were 11,190 and 2,674; the case mortality stood, therefore, at 23.9. In 1895, however, while the notifications rose to 11,229, the number of fatal cases fell to 2,289, and the case mortality was therefore only 20.4 per cent., the lowest rate for the whole year yet recorded. The numbers for the first half of the present year are respectively 6,193 cases notified, and 1,239 deaths, which work out to a case mortality of 20.2 per cent. In view of the fact that quite irrespective of the number of cases, the case mortality of the last half of the year is invariably below that of the first, it may fairly be anticipated that by the end of 1896 the year's case mortality will for the first time on record have sunk below 20 per cent. This diminution in case mortality, which appears to be still in progress, represents the annual saving of some hundreds of lives, and I may be allowed, in conclusion, once more to repeat that it is difficult to see what cause can have been at work during the last two years in producing so marked a result, unless it be the treatment by antitoxin."

DR. A. SHERIDAN DELEPINE of Manchester, in his opening address as chairman of the Section of Pathology, dwelt on the place of pathology in medical education, saying that it formed such an important part of medical science that any question touching medical education necessarily concerns teachers of pathology, who should do their utmost to make their subject useful and not a stumbling block to the medical student. This is all the more important as pathology has only of late been recognized in our universities or colleges as a subject worthy of a special chair.

To quote Professor Hamilton's words: "It will, I think, be granted that the pathology of to-day is not delimitable merely as a matter of pure morbid anatomy, pathologic histology, pathologic physiology, pathologic chemistry or clinical medicine, but that these are simply the members of a great body, and that they are indissolubly bound together."

He first considered how the subject is taught in schools thus:

1. Under the name of clinical medicine, that part of pathology which deals with symptoms, diagnosis, prognosis, is taught at the bedside with applied therapeutics.

2. The same subjects are also usually dealt with in systematic lectures on medicine and surgery, lectures which are also very often made to cover a considerable portion of other branches of pathology.

3. Pathologic anatomy is taught in systematic lectures and demonstrations, and practically in the postmortem room.

4. Pathologic chemistry and histology are taught by means of lectures and demonstrations, and of practical classes.

5. Etiology and pathogenesis are taught by means of lectures, which are sometimes complemented by a practical course in bacteriology.

6. Experimental pathology is reserved for advanced students, and does not form a regular part of any curriculum.

If all these subjects were taught by the same man, he would certainly not require to say in systematic lectures what he had already clearly explained at the bedside or in the postmortem room, or in the laboratory; he would as much as possible try to save his own time as well as that of his pupils by not repeating himself. He would reserve for lectures those subjects that can not be easily and better taught by actual demonstration.

Is it possible for three or four men teaching the various branches of the same subject so to combine their efforts as to give students the benefit of advantages which they would derive from being taught by a single man? He believes that, within certain limits, such a thing is possible on condition that the following principles be kept in mind by all teachers:

1. Every fact capable of simple actual demonstration should be taught by means of demonstration whenever this method does not involve excessive loss of time, considerable expense, wanton cruelty or a knowledge of methods unknown to the student.

2. In each department the teacher should, as much as is compatible with clearness, confine his teaching to the demonstration and exposition of those facts which fall within the natural sphere and the actual work of his department.

3. It seemed to him also important that the time devoted to the study of each branch of medicine should be proportional to the relative importance of the facts and principles taught, rather than to the number of details which have erroneously been thought to be necessary elements of certain studies. And in determining the relative value of scientific courses from an educational point of view, he would feel inclined to give the preference to those in which it is possible to make the student see and judge for himself. Lectures should be reduced to the smallest number compatible with a clear exposition of those principles which would otherwise have to be constantly repeated in the course of practical demonstrations, or to those subjects which are not capable of demonstration at all.

In order to give a more concrete form to his ideas, he asked the members to suppose that they follow a student desirous of gaining personal knowledge in his study of cases, medical or surgical.

1. In the wards of the hospital he is shown how to recognize the presence of certain symptoms, and from this to establish a diagnosis; he then sees various modes of treatment, surgical or medical, applied, and is made to note the course of events that follow, being thus initiated to the art of prognosis. Here the only means he has to test the accuracy of the views expressed to him by his teachers are the effects of treatment and the correctness of the prognosis.

2. In the postmortem room he has an opportunity to see for himself what gross lesions correspond to some of the symptoms to which his attention has been attracted during life. The meaning of the appearances due to alteration of size, shape, color, etc., have to be explained to him as far as it is safe to do so from a naked-eye examination. The teaching in the postmortem room can not go further, and is necessarily fragmentary.

3. It must therefore be supplemented by demonstrations of museum specimens by which complete series of lesions, some of which occur rarely in the postmortem room can be made to illustrate the coarse anatomic changes produced in the body by disease. Such specimens being provided with short clinic histories, there should be as little room for speculation as possible regarding the nature of the symptoms associated with the lesions. This general study of morbid anatomy is specially useful in directing the mind to the parts of the body which are most generally affected by disease, and to the way in which certain symptoms are mechanically produced. Naked-eye anatomy, however, gives very little information regarding the nature of the reactions of the organism to morbific agents; it seldom gives the means of finding the actual cause of diseases, and it must be admitted that many of the naked-eye appearances are so ambiguous that even an experienced morbid

anatomist is often mistaken as to the meaning of lesions observed in the postmortem room or in the museum.

4. In the histologic laboratory the student sees the changes of structure which give rise to the appearances observed in the postmortem room, and here he begins to be on firmer ground and better able to acquire a knowledge which will depend less on an extensive practical experience than on well-trained powers of observation. The reasons for this are: 1, that all the organs of the body are composed of a few elementary tissues; 2, that these tissues are composed of cells which have many properties in common: 3, that the morphologic changes indicating the reaction of these cells to pathogenic agents are very comparatively few. It is, therefore, possible for a teacher to impart within a limited space of time and by means of actual demonstrations a tolerably complete and accurate notion of the anatomic changes produced in the organism by disease. It is to these advantages and not to any special fancy for microscopic work that pathologic histology has taken such a leading part in the study of disease.

5. We now come to the most difficult part of pathology. So far, we have had to deal only with the objective parts of the subject, with facts which necessitated chiefly powers of accurate observation, and which could all be easily demonstrated. When we come to deal with causes of disease and with the way in which lesions are produced we must necessarily introduce into our work induction, deduction and experimentation. When a number of facts seem to indicate that two or more phenomena are correlated and due to the action of a certain cause, we feel generally, when dealing with biologic problems, that we may have overlooked many factors, and therefore we have to test our views by experimentation. Experimentation is not, however, always guided by direct observation, for it often happens that the causation of certain lesions is inferred from what we know of the causation of other more or less analogous lesions.

The conclusion which the speaker drew from the above considerations was that students could obtain a more useful knowledge of medicine if they had fewer lectures and more practical courses. They should be made to attend thorough practical courses on: 1, pathologic anatomy, histology and chemistry; 2, bacteriology as applied to the study of infectious diseases; 3, general clinical medicine and surgery, with special courses in special branches of clinical work, such as diseases of women and obstetrics, diseases of children, infectious diseases, mental diseases, diseases of the eye, of the ear, of the throat, etc.

Systematic lectures should be confined to courses on: 1, etiology of disease and pathogenesis; 2, general considerations regarding the practice of medicine and surgery. These courses should be as short as is compatible with a clear exposition of those principles which but very few students would be able to formulate for themselves from the study of facts.

Sir Joseph Ewart of Brighton in opening the public medical section, delivered an address upon the lowering of the general death rate. He said that in time typhoid fever, consumption, scarlet fever and many other diseases would come to be prevented with as much success as had attended the warfare against scurvy, the plague, leprosy, cholera, etc., and to assist in securing that end our scientific machinery should be perfected.

One of the subjects discussed in the section was vaccination and revaccination, and a resolution was passed that it is desirable that calf lymph should be made universally available by the State.

The section on ethics discussed the abuse of the out-patient system in hospitals. Mr. Loch, secretary of the Charity Organization Society, read a paper in which he said, that while there were 87,000 in-patients in London hospitals, there were over a million and a quarter out-patients. Millions of out-patients at hospitals must mean large numbers of patients withdrawn from the general practitioner. He suggested that the number of out-patients should be limited to as many as could be fully and fairly dealt with in the allotted time, and that there should be a well-trained almoner at a hospital able to make proper inquiry or insure its being made.

Dr. Nelson Hardy challenged anyone to say that the out-patient departments were carried on by assistant physicians out of charity and benevolence. The appointments were accepted by them with a view to their own advancement and ultimate profit.

Dr. G. H. Broadbent of Manchester read a paper on "Provident Dispensaries," cautioning medical men against such institutions.

Dr. Major Greenwood of London said the cheapening of medical services through the outdoor departments of hospitals was doing an appalling amount of mischief to the medical profession, and the time had come to secure radical reform. Other members spoke on the same line.

Dr. Alex. Ogston of Aberdeen presided over the Section of Surgery.

An interesting discussion on

PROSTATIC HYPERTROPHY

was opened by Dr. David MacEwen of Dundee, who said that as long ago as 1856 Mercier had suggested the operative treatment of an enlarged prostate which was causing obstruction to the outflow of urine. The method proposed was to remove part of the enlarged gland through the urethra—in other words, to perform urethral prostatectomy. Following Mercier, Sir Henry Thompson and Reginald Harrison had urged perineal section and drainage. Later, Dr. Wm. T. Belfield of Chicago employed the "combined method," as did also Dr. Nicoll of Glasgow and Dr. Alexander of New York. But whatever form of prostatectomy was employed, the mortality was still high, and even now reached 20 per cent. In 1893, Dr. J. W. White of Philadelphia suggested that the testes had an influence on the nutrition of the prostate similar to that exercised by the ovaries on the uterus, and that just as oöphorectomy leads to a diminution in size of the fibroids of the uterus, so would castration lead to atrophy of an hypertrophied prostate. In May, 1895, White reported the results of 111 cases in which orchectomy had been performed for the purpose of causing atrophy of an hypertrophied prostate. Of this number, in 82 per cent. rapid atrophy is said to have taken place, in 52 per cent. cystitis had either disappeared or had been materially lessened, in 66 per cent. there was a return of vesical contractility, in 83 per cent. there was marked amelioration of troublesome symptoms, and in 46.4 per cent. there was a return to the normal conditions. Dr. MacEwen said he had collected fifty-two cases of orchectomy operated on since White read his paper; of these forty two were said to have resulted more or less successfully; of the ten unsuccessful cases, in four there was no improvement, and six died. The speaker had himself operated in five cases. Of these, three were treated by double orchectomy, and two by resection of the vas deferens. Orchectomy is sometimes followed by marked mental disturbance, but this is never seen when the testis is removed for disease. The essayist had had no experience with unilateral orchectomy. The results of resection of the vas deferens are divergent. He had done it twice. The first patient died within a week from uremia. The second case was 65 years of age and for seven years had been troubled with micturition. Dr. MacEwen drew the following conclusions:

1. In many cases castration causes more or less atrophy of the prostate.
2. Atrophy occurs most commonly when the prostate is soft.
3. It is of most value when the enlargement is general.
4. Cystitis may be relieved or cured.
5. In marked cystitis drainage is better.
6. It may do away with the necessity of the use of the catheter.
7. Or the catheter may be required less frequently.
8. Resection of the vas deferens acts more slowly, but the effect is similar.

Mr. Reginald Harrison of London, read a paper on

VASECTOMY, OR DIVISION OF THE VAS DEFERENS FOR PROSTATIC HYPERTROPHY.

He stated that cases of vasectomy could be divided into two groups: 1, where only one vas has been divided; and 2, where both have been operated upon. He had performed unilateral vasectomy in twelve cases. Of these seven obtained permanent benefit, and in five negative results were secured or the patient could not be traced.

One patient was 69 years old. He had a large prostate. Micturition occurred hourly, but no catheter was necessary. The right lobe was distinctly larger than the left. The right vas was divided, the patient was able to retain urine much longer, and the right lobe atrophied. In the second group of cases there were ten; of these, five were much benefited. In two cases there was no improvement, two disappeared, and one is too recent to be considered a success. This case was that of a man 70 years of age, who had a suprapubic fistula after lithotomy. Micturition was attended with considerable difficulty. Double vasectomy was performed, and he was able to abandon the use of the catheter. In the five successful cases the points gained were diminished frequency of urination, improved condition of urine and less suffering from vesical spasm. No fatal cases, and no cases with mental disturbance.

Lastly, both by castration and by resection much good could be done. It should be remembered, however, that some cases were not benefited by either method.

Mr. C. Mansell Moullin, of London, looked upon statistics as almost valueless, and said he relied on his individual experience. He would include prostatectomy as one of the methods

of treatment of enlargement of the prostate; while the mortality was very high, it had of late been materially reduced. For instance, of eleven cases reported by Mayo Robson, there was only one death, and Mr. Moullin himself had operated on five cases with no deaths. He urged the importance of operating on cases before the urine was ammoniacal and before cystitis and pyelonephritis had supervened. The operations of castration and vasectomy should be reserved for cases unsuited for prostatectomy. In eleven cases he had done bilateral orchectomy, but he did not think any benefit would follow from the unilateral operation. Of the eleven cases, three died. In six of the eight cases which survived the relief was great.

PROF. JOHN CHIENE of Edinburgh, held that castration should only be performed when all other means had failed to afford relief in prostatic enlargement. Suprapubic cystotomy should be first tried in cases in which an operation was needed, and then if there was enlargement of the third lobe, and if the urine was aseptic, the third lobe might be removed. In case the urine was septic, the surgeon should wait for six weeks, if no relief occurred even then perineal drainage should be tried, and a tube inserted, which might be worn with comfort for years.

MR. F. A. SOUTHAM of Manchester, took the ground that an operation was required in only a limited number of cases. He urged the early use of the catheter. If the urine is septic, the bladder should be washed out and antiseptics, such as salol given by the mouth. These failing, suprapubic cystotomy should be done. In some cases in which he had resorted to double orchectomy, a complete cure had resulted.

MR. C. A. MORTON of Bristol, had done double orchectomy in one case, the man being 70 years of age, who had much enlargement of the prostate, and frequent micturition. Atrophy followed gradually, but the patient had improved.

PROFESSOR I. H. CAMERON of Toronto, had done double orchectomy in twenty cases, with one death from suppression of urine.

DR. MACEWEN, in closing, said he did not wish to be understood as implying in his previous remarks that orchectomy should sepersede prostatectomy. He should try resection of the vas deferens, after listening to the remarks of Mr. Reginald Harrison. Intra-vesical growths should be treated by prostatectomy, but that general enlargement of the prostate requires orchectomy. Drainage was simply palliative and may be used in very weak or aged patients.

THE GENERAL MEDICAL COUNCIL.

The probability of an animated discussion in reference to the General Medical Council—which, as is well known, is a Government institution created by the medical act of 1858—attracted an unusually large number of medical men to the section of Ethics. Nor were they disappointed for the discussion, though one-sided, was certainly vigorous. The attack was lead by DR. A. G. WELSFORD, who opened with a very outspoken criticism of the General Medical Council. "The history of the Council," said Dr. Welsford, "is one long story of wasted opportunities and neglected duties. Although by pressure from without it has been forced into a semblance of activity, the work has been done unwillingly, and when possible, difficulties have been created. The Council is a great stumbling block to reform. Its failure is mainly due to its non-representative character, which places it beyond the control of the medical profession. The Council is mainly composed of nominees of universities and colleges, and the net result is that whether the Council originally was intended to protect the public or the profession, it actually is concerned only with the interests of these bodies. The General Medical Council is an anachronism. It is out of date in the nineteenth century. Its very constitution embodies the opposite of the principle 'No taxation without representation.' The medical profession has to pay for a governing council which it does not elect, over which it has no control, but which has arbitary and absolute power of legislation upon matters affecting general practice of which the members of the Council are profoundly ignorant. A new spirit has appeared in our profession. We long ago lost respect for the impotent and vacillating coterie of university and corporation nominees, called the General Medical Council.

"We recognize its callous indifference to all other interests than its own, and we object to contiuue to pay for the maintenance of this nineteenth century medievalism. When we obtain a new medical act, as we shall succeed in doing by union and organization, a new council will be created, and this council must be one representative of the profession. Combined attack is being made on all sides upon institutions which maintain and protect vested interests, and the Council will not escape deserved censure. Apologists may assert that the Council is the best possible in this best of all possible worlds, may whittle down these duties to vanishing point, and then claim that the Council performs these duties most ably, but the medical profession can not any longer be hoodwinked as to the real nature of the General Medical Council and will with united voice demand reform."

PROF. VICTOR HORSLEY of London pointed out the great danger to which the profession is liable in consequence of the standing orders of the General Medical Council in regard to "condemnation of infamous conduct" and "the protection of the honest practitioner from exploitations of quackery." He complained, among other things, that the president of the council was endowed with a degree of autocracy which was dangerous to the safety, honor and welfare of the members of the profession. The profession ought to memorialize the Council to appoint a president who was capable and scrupulous, and to actively urge reform upon its very imperfect procedure.

DR. LOVELL DRAGE of London agreed that the great fault of the General Medical Council was that the president had absolute power under the standing orders, which should be radically reformed. The medical profession, he said, was given over to the hands of its enemies, and it was exceedingly difficult for the five direct representatives to use moral suasion. What could five votes do against twenty-five when those twenty-five were the votes of men who had common interests and common monopolies to defend? The cornerstone of the whole edifice of reform must be an increase in the direct representation.

It happened that a member of the General Medical Council was present in the Section. DR. GLOVER of London, who is a "direct representative" on the censured body, but is not a member of the British Medical Association, was invited to say a word in defense of the General Medical Council. Dr. Glover admitted that there was great force in the complaints that had been made as to the way in which the disciplinary work of the Council had been carried on and as to the powers of the Penal Committee. At the last meeting of the Medical Council there was a strong feeling that a change was necessary in the conduct of penal cases and in the way in which evidence was to be laid before the Committee and the Council, and he thought he could encourage them to believe that in the future the investigations and the evidence would be much more complete than it had been in the past. He hoped this Association would not lend its sanction to the idea of relieving the qualifying bodies of their disciplinary functions, for it was explicitly stated in their charters that they should not only qualify men but take note of their conduct.

DR. W. DOUGLAS (Leamington Spa) considered that Dr. Glover had only confirmed the very unfavorable view entertained with regard to the General Medical Council. It was difficult to move that Council, and he suggested that instead of going to them they present a petition to Parliament, showing how inefficiently the Council peformed their duty, keeping neither the spirit nor the letter of the laws which they had to administer. If by that means they did not get a new Act which would give better representation to the profession on the General Medical Council, they would, at least, bring such pressure to bear on the Council as would compel them to act in the interests of the profession.

Much merriment was provoked by the suggestion of DR. BROADBENT of Manchester that a new element in "moral suasion" might be introduced by appointing on the General Medical Council a lady doctor, who might have some power over the gentlemen in that body.

DR. JAMES MYRTLE of Harrogate believed the root of the whole difficulty was that the Council was an antique and insufficient body. He agreed that if they could put pressure upon their representatives in Parliament they would secure an alteration of the Council and a greater share of direct representation.

SELECTIONS.

The Curative Serum of Hydrotherapy.—It is a fact long since known that the pathogenic microörganisms and their products possess poisonous properties. Experiments and observations have taught us that the system reacts against these poisons by producing antipoisons and other preventatives which are only known to us to a minor degree. From the endeavor to antagonize the poisonous products of infection by their antipoisons, serum therapy has emanated. Like every other organic func-

tion the resisting power which the system possesses in order to keep off injurious influences, can be strengthened by methodic rote. As we can gradually make ourselves unsusceptible to mineral and vegetable poisons, like arsenic and morphin, we can also to those poisons produced by microörganisms.

Upon such a systematic strengthening of the natural resisting powers of the system against a certain poison immunization seems to be based. It is now said that the blood serum of the immunized animal contains those antitoxins which, when injected into a person who is afflicted with the same injection are able to assist the patient in overcoming the disease.

As, however, the sovereign antitoxin for any and every injection has not yet been discovered, a certain serum must be prepared for every species of disease. After the readily prepared antitoxins have been injected into the blood, they must be converted by the system in such a way as the healing process requires.

Yet it is doubtful, if the serum injected is equivalent to the one produced by the diseased system itself; it is also doubtful, if the entire process of reaction against the disease consists exclusively in the serum and the antitoxins. It is more likely that the whole system and all its functions participate in the process of reaction, that in the cells themselves and their assimilation, in the nervous system, etc., auxiliary powers are put in motion. We must also consider that the injection of the blood serum of one animal into the blood of another species undoubtedly involves dangers. Serum therapy tends to substitute in an artificial way a substance which the system is unable to produce, at least not to a sufficient amount. It may not be timely to criticize the new treatment, still we must admit that we know but very little of the biology of so-called internal secretion and that the substitution of living or morbid tissue or serum can not at all be held for an actual substitution of the missing or imperfect function. The various physiologic and pathologic proceedings can be explained by physic and chemic laws only partially, which is the reason diseases can not always be treated in the same way and why equally competent physicians often disagree entirely as to the same remedy. From quite a different standpoint I believe in antitoxic powers of the living organism and in the more or less complete substitution of a missing function by the system itself, or in other words, I believe in an "autoserum" and "autoorgano-therapy" and in the possibility to improve this "autotreatment" by physic agents. It is no longer doubtful that numerous infectious diseases, often the most severe and dangerous types, convalesce without any medical aid whatever. If, therefore, the power of the system to overcome the infection, intoxication or autointoxication, consists in the blood and its serum, as is supposed to-day, the system itself must produce the antitoxins required to defeat the infection. "Gradually," says Buchner, "we have come to the conclusion, and this has since been proven by experimental investigations, that the system is possessed of natural auxiliaries against the producers of disease." I have occasionally controverted the belief that this conclusion is of a late date. Since Hippocrates and since there are medical schools, the physicians were forced to come to this conclusion from the observation of the undisturbed course of various diseases.

Could we now prove that there are agents by which we are able to improve or even call in action the natural powers of the system to resist the producers of disease, or in other words, to assist the system in its fight against the injurious influences, we would have to call this treatment a rational and physiologic one. And we would have to consider, if such a treatment which is based upon the action and functions of the system, was not less dangerous, and yet, not less efficacious than any other artificial treatment. It would lead me too far to prove this for the effects of all physic agents. This has been done repeatedly by numerous investigators, also by myself, and it has been shown that there is no function of any organ or any system of organs which can not be altered, invigorated or labefied by thermic and mechanic agents. As to hydrotherapy, I only want to say that it is first of all a therapy of oxidation, as is shown by Pospichil's and my own investigations on respiration, and by Strasser's and others' investigations on the chemism under thermic influences; it is a therapy which increases internal oxidation, leucocytosis and the alkalescence of the blood. We not only command the distribution and circulation of the blood by thermic agents, but also its morphologic and chemic composition, as I have shown years ago. In the first place, I found, at the same time as Rovighi did—that upon the employment of cold, leucocytosis sets in, a fact which is of fundamental importance for the explanation of the effects of thermic applications in infectious diseases. I knew long ago, and have mentioned this repeatedly, that the decrease of temperature could only partially explain the favorable effects of the water treatment in infectious diseases. We have long been familiar with the favorable symptomatic effects which an improvement of innervation, circulation and tonus of blood vessels and tissue caused by the water treatment has upon the feverish process. But we could not explain how the treatment could affect the pathogenic microörganisms and their toxins. If, however, the leucocytes are the real phagocytes in the meaning of Metschnikoff and, as Buchner says, the transporters of the alexins, the destroyers of the toxins, we understand why we can affect the infection by means of hydriatics which enable us to produce leucocytosis at any time we desire. Further investigations taught us that under the cold water treatment, also the red blood corpuscles, the specific weight of the blood and the amount of hemoglobin increase considerably. If we further consider that we can stimulate or modify the circulation in the whole body and the locus morbi by hydriatics, we have a good explanation for the value of the water treatment in infectious diseases.

Further we must consider that numerous secretions and excretions can be affected considerably by hydriatics. I called attention to their diuretic effect in infectious diseases long ago, a fact of great value in regard to prognosis. Rogue and Weil saw the urotoxic coefficient of the urin increase in typhoid fever under the hydriatic treatment, and proved that under this treatment six to eight times as many toxins were eliminated as under any other treatment. Thus we know also that the elimination of the noxæ and their products by the kidneys, the skin, the bowels, the salivary glands and probably most of the excretions belong to the reaction of the system against the infection, which reaction can be greatly invigorated by hydrotherapy.

Even the chemic composition of the blood can be changed by cold applications, as has been shown by Strasser's investigations. The alkalin blood is of great importance not only as a vehicle of the phagocytes, but also because of its chemic condition. Numerous investigators observed that the alkalin reaction of the blood decreased considerably in infectious diseases. Tassinari found from experiments on rabbits, that upon a septic infection the index of alkalinity decreased from 3.6 to 1.58 within two days. It could hardly be doubted any more that the intensity of the bactericide power of the blood and, probably also the neutralization of various acid products of the microörganisms, depend upon the degree of the alkalescence of the blood. Strasser by his investigations has made this presumption a certainty, and has shown that cold baths increase the alkalinity of the blood. This fact forms an exact basis for Buchner's presumption that "the cold water treatment very probably acts as a direct destroyer of the producers of infection."

Thus we can call the hydriatric treatment a true autoserum, and autoorgano-therapy by which the blood and its serum obtain a stronger bactericide power and by which we have a perfect control of the circulation of the blood in the whole system, at

large, and in the locus morbi, in special. It is a treatment by which the functions of all organs and also the internal oxidations are increased and improved considerably, and which is a natural stimulus to vital energy.—PROF. W. WINTERNITZ, Vienna. Translated by Dr. Carl Strueh, Chicago.

Organ Extract Therapeutics of Female Genital Organs.—The *Therap. Woch.* of July 12 contains an article by Bell of Glasgow, describing his success in the treatment of carcinomas, fibromas, etc., of the female genital organs with extracts of the thyroid, parotid and lacteal glands. The parotid gland seems to have an important effect on ovarian troubles, and the lacteal on uterine. He describes fourteen cases taken at random. The patients applied to have the neoplasms extirpated, but this soon became unnecessary after taking a teaspoonful three times a day of one of these extracts, with ichthyol or iodophenol tampons applied locally. The neoplasm rapidly diminished in size, while the general health improved, and the patients were dismissed practically cured, with no further pains or discomforts, and in some cases no trace left of the neoplasm after a few months of this treatment. Knauer has succeeded in implanting an ovary in the uterus of four rabbits, which became incorporated with the tissues and resumed their functions, reproduction of ova. Mainzer reports various climacteric troubles cured by two 5 gram pastilles a day of freshly dried ovarian tissue, increasing the dose to three pastilles a day, returning to a smaller dose as the troubles disappeared. In two cases menstruation was produced in women who had never menstruated before. The most favorable results were obtained in troubles of a vasomotor nature; next came primary or secondary amenorrhea, while purely nervous or hysteric patients were not affected by it except suggestively. These facts may be found useful in differentiating. Jayle has successfully treated the troubles consequent to castration with dry ovarian extract or an ovarian fluid prepared in the same way as the Brown-Séquard extracts. He considers himself justified in advocating ovarian therapy in amenorrhea or dysmenorrhea caused by ovarian disorders, as it may render castration unnecessary.

Gymnastics in Heart Disease.—The *Boston Medical and Surgical Journal*, June 18, contains an elaborate report of the discussion, before the Society for Medical Improvement, of the above subject. Some interesting observations by Dr. Folsom were the following:

"When I was in Munich in 1879 I had considerable talk with Ziemssen about the treatment of organic heart disease by muscular exercise, to which Oertel had called the attention of the profession several years before. Ziemssen was using it pretty generally in his practice, and I asked him to see an American gentleman who had seen a number of specialists in this country and in London and had been advised not to take vigorous exercise. Ziemssen immediately put him on Oertel's treatment, and that very afternoon this gentlemen walked a number of miles over the hills in the vicinity of Munich. He has kept up that treatment, more or less, under suitable guidance. He now walks, rows, walks over hills, rides horseback and has absolutely no symptoms so far as his heart is concerned. The valvular murmur is pronounced and the heart is larger than it was then. The compensation is perfect, and it seemed to me an extremely good result. It was not one of the cases to which allusion has been made, of beef-eating, beer-drinking Englishmen. He was very temperate in all respects, and did not materially change his course of life. Five or six years ago a highly accomplished Swedish medical gymnast came to this country. She had a large practice after graduation, and was so proficient in her work that she had been the assistant of the professor in charge in Stockholm. She came into the wards in my service at the City Hospital and did some work to show me what she could do. Since then I have used gymnastic exercise very largely in my practice. . . . There were three things with regard to the Swedish medical gymnastics which struck me: In the first place, the very complicated system; secondly, their apparent simplicity, and thirdly, their great power for good or for evil according to the judgment and skill of the operator. I think in the whole system which Ling introduced there are something like one thousand different movements. I was also struck with the extreme simplicity of them. One would hardly think their physiologic effect would amount to so much. As regards the very great power of these movements, the movements to correct slight scoliosis may defer menstruation one, two, three or four weeks. On the other hand, in the absence of menstruation it can be brought on with great rapidity. It is the most efficient means of correcting metrorrhagia without organic trouble that I have seen. I have had a number of cases of organic disease of the heart treated in this way. I have four at present. One is a lady who five years ago had valvular disease of the heart, dilated heart, weak, irregular, intermittent pulse, and had had complete hemiplegia of one side, including the face. She has continued that treatment more or less all this time, and it has constituted one of the chief means of treatment. The pulse is regular, a little above seventy. She considers herself in perfect health. Another is a lady with a marked arterio-sclerosis and dilated heart. She has been under my care about two years, and that has been the chief method of treatment. The benefit in that case has been striking. . . . My belief is that the best way of using physical exercise, if the person is able to do it, is some out-of-door, regular, general exercise. Of course a very large number of patients can not do that, and the medical gymnastics which would be required in valvular disease of the heart where there is compensation or hypertrophy, would be entirely different from the movements which would be required in a dilated heart where the walls are weak, and especially where there is arterio-sclerosis. It seems to me that while there are people in this community who are sufficiently accomplished and can be trusted in these cases, and who have demonstrated the very great value of this treatment, there is also a large number who call themselves Swedish medical gymnasts who have certificates or diplomas of varying value, and whose knowledge is so imperfect that they are dangerous persons to set to work on any important or difficult case."

PRACTICAL NOTES.

Eliminative Treatment of Typhoid Fever.—M. Gottman, M.D., gives the following synopsis of the treatment: 1. Eliminate the poison by the free use of salin cathartics, as they are best and safest. 2. Give baths of ten or twenty minutes' duration, beginning with the temperature of the patient, for their tonic and sedative effect, as well as their eliminative action. 3. Dilute the poison freely by imbibing largely of good, cold water. 4. Avoid food, unless peptonized (and sometimes even this will not agree), until you know it can be digested, and this applies especially to milk and lime water. The mental and physical condition of the patient is the best index to the exhibition of food.—*Memphis Med Mo.*, August.

Bekarewitsch Treatment of Varicose Ulcers.—After the spot is thoroughly disinfected, a piece of gauze smeared with a 10 per cent. boric vaselin is laid over it, through which it is delicately massaged for five to ten minutes, and then more energetically. It is then dried and dusted with iodoform and wrapped in an antiseptic bandage covered with the following: Zinc oxid and gelatin equal parts; glycerin and dist. water, four times the quantity, equal parts. The whole is then enclosed in a starch bandage and left undisturbed for two or three days, during which time the patient can go about and do light work.—*Therap. Woch.*, July 12 from *Wratsch*, No. 1.

Improved Method of Narcosis.—Gräfe has found that the sensitiveness of the nasal membrane is of far more importance in terminating narcosis than is generally supposed, owing to its reflex action on the vagus region. If the nose can be kept closed, the narcosis proceeds far more readily and rapidly, and lasts much longer, with less of the anesthetic required. He has therefore invented a light spring pad with which he stops the nostrils before the operation, and does not remove it until the patient is completely aroused. (Schütz, Leipsic, Windmuhlenstrasse, 30.) It has rendered surprising service in the narcosis of persons with pronounced heart troubles, with the minimum of after effects.—*Cbl. f. Chir.*, July 18.

Somatose Increases the Lacteal Secretions and Improves the Blood.—Drews reports from his experience in twenty-five cases that somatose has a direct specific effect on the lacteal glands, promptly and efficiently increasing their secretions. He urges its use in all cases of deficient or decreasing lacteal supply, recommending one teaspoonful three to four times a day, in a cup of warm milk, soup, cocoa, etc. Owing to its tastelessness, the use of it can be kept up indefinitely as long as it may be needed (*Cbl. f. inn. Med.* No. 23). Sconamiglio has been making a study of the blood of patients taking it with no other medication. He found that the erythroblasts gradually increased in number, while the microcytes and poikylocytes decreased. The amount of hemoglobin was increased from 8.9 per cent. to normal, 13.5 to 14.5 per cent.—*Therap. Woch.*, July 12.

Chronic Otorrhea Permanently Cured with Trichloracetic Acid.—Halasz confirms Okuneff's announcement of the value of this treatment, and recommends the following modus operandi: As the pain is severe, five to eight drops of a 10 per cent. solution of cocain should be held in the ear for three minutes. During this time a syringe of tepid water should be used to melt the crystals of the acid on the specially constructed sound. The inner ear is then lighted and the sound introduced into the middle ear through a rubber ear speculum. Every spot to be cauterized should then be touched lightly but effectively with the acid, especially the edges of the perforation and the mucous membrane of the middle ear. The ear should then be rapidly rinsed out with one or two syringes of water and after it is dry, dusted with aristol or powdered borax blown in. The operation should be rapid and repeated once or twice a week, when the otorrhea soon disappears, the perforation in the drum closes, and the hearing is completely restored.—*Therap. Woch.* July 1 from *Orvosi Hetil.* No. 17.

Sodium Hyposulphite Antidote for Malonic Nitrite.—Heymans of Ghent reports that "nitrite malonique" (dinitrite malonique, CN, CH_2, CN) is fatal at a dose of .006 milligram per kilogram (rabbit), with symptoms resembling intoxication by hydrocyanic acid. Animal succumbing to this intoxication can be recalled to life at any moment, even when in convulsions, by an intravenous injection of sodium hyposulphite, and if the latter is injected at the same time as the nitrite there are no toxic accidents. The interesting point is that the antidote follows and neutralizes the poison in the inmost nerve cells, instead of its action being restricted to the poison in the blood or the alimentary canal.—*Bulletin de l' Académie de Méd.*, July 22.

Lewaschew Method of Substituting Salt Solution for the Effusion in Pleurisy.—Requests have been received by the JOURNAL for further information in regard to this method. We refer those interested to the *Deutsche Med. Wochenschrift*, No. 52, 1890 (G. Thieme, Leipsic, Seeburgstrasse, 31), and to the *Therap. Woch.* of June 28 (Vienna, XIX, Döblinger Haupstrasse 36). Lewaschew states in the former: "I first, with extreme care and very slowly, withdraw a certain amount of the effusion from the pleural cavity, stopping at the first indication of pain. Then with a syringe I very carefully introduce the same amount or a trifle less of the 7 to 10 per cent. sterilized chlorinated soda solution, warmed to about 86 degrees. Again I withdraw the effusion from the cavity until slight pain is experienced, when I stop and again introduce a corresponding amount of the salt solution. I repeat this procedure from two to six times as may be necessary, which depends upon the character of the effusion and the peculiarites of individual cases." (See this JOURNAL, page 214, July 25.)

Early and Intensive Method of Curing Syphilis.—Manino reports the highly successful results of eight years' experience with this treatment (*Giorn. It. delle Mal. Ven.*, p. 50). Instead of waiting for the usual symptoms to appear, the initial chancre is excised or thermo-cauterized and calomel injected every fortnight for ten to twelve months (10 centigrams calomel to 1 gram glycerin and one drop water). After this the injections are made every twenty days for three or four months; then one in sixty days for two months more, when potassium iodid is administered for two months; then two months more of mercury injections, this time the sublimate. The patient then rests for a couple of months, when the iodid is recommenced for a while, followed by a protoiodid, which is kept up till the end of the second year. The initial chancre soon subsides, and no secondary or tertiary phenomena have appeared in any of the cases treated during the eight years. The inconveniences of this treatment, the painful injections, the temporary loss of appetite and weight, are far more than compensated by the victory over the disease, which is arrested before it becomes constitutional.—*Bulletin Méd.*, July 22.

The New Celluloid Mull Bandage.—It has been found that celluloid will dissolve in acetone into a thick gelatin, which can be used for casts, as it hardens sufficiently in an hour and a half, and becomes absolutely solid in three to four hours. The sheet of celluloid is cut with a pair of scissors into scraps and placed in a wide-mouthed bottle, filling it a quarter full. The rest of the bottle is then filled with the acetone and the contents stirred with a stick occasionally. When rubbed on the mull bandage it forms the cleanest, hardest, and by far the lightest substance known for this purpose, while it is not affected by the secretions of the body. It has been used at Strasburg with great success, and is warmly recommended as a most valuable bandage on account of its cheapness, durability, solidity and elasticity, especially for use in policlinics. It is not necessary to have as many layers of the bandage as with other substances, and the celluloid rubbed in for the outer layer forms a handsome finish. As it is very sticky and can only be dissolved with acetone, it is best to wear leather gloves while handling it. It is especially adapted for permanent removable casts, with or without splints. In some cases a cast or model of the limb or part has to be made, and the celluloid cast modelled on this.—*Cbl. f. Chir.* July 18.

Oxycyanid of Mercury; Ophthalmia Neonatorum.—Von Sicherer, in the *Münchener Med. Wochenschrift*, recommends the use of mercury in the treatment of ophthalmia neonatorum. The advantages of this drug were first brought to the attention of ophthalmologists by Schlosser in 1893, at the meeting of the Ophthalmological Society in Heidelberg. Schlosser demonstrated that this preparation presented antiseptic properties equal to those of the bichlorid of mercury, but caused much less local irritation and much less power of coagulating the albumin than the corrosive sublimate. Generally in acute affections of the conjunctiva 1 or 2 per cent. solutions were used. In ophthalmia neonatorum a solution of 1 to 500 has proved most effectual, and has been used exclusively in this affection in the University clinic for several years past. The application is extremely simple: After eversion of the lids they are rinsed thoroughly with this solution, and in such a manner that every fold of the conjunctiva is freed from the secretions. This should be done daily. Instruction should be given for the constant use of ice compresses. The nurse should be cautioned against removing the secretion, for, unless the greatest care is exercised, injury is done to the superficial layers of the cornea with subsequent ulceration. If the cornea is not already affected when this treatment is begun, a favorable termination can be absolutely guaranteed, which is by no means the case with other methods of treatment. Even when slight infiltrations of the cornea exist, by this means they can usually be made to subside, and it is only in extensive ulcerations and in prolapsus of the iris that this and other means of

treatment are of no avail. If the results of the ordinary method of treating this affection—namely, brushing with a 2 per cent. solution of nitrate of silver and neutralizing with a solution of sodium chlorid—be compared with those obtained by simply rinsing with the oxycyanid, the preference would be unhesitatingly given to the latter method. An efficient remedy for combating a disease which causes 41 per cent. of the cases of total blindness should be welcomed by all.

Delayed Paralysis after the Use of the Antidiphtheritic Serum.—Filiatre in the *Gazette Hebdomadaire de Med. et de Chir.*, June 4, has reported the case of a child 3 years old, presenting symptoms of laryngeal obstruction which proved on bacteriologic examination to be of diphtheritic origin. An injection of 15 c.c. of antitoxic serum was at once made into the right flank, and forty-eight hours later a second injection of 10 c.c. into the left flank. In the course of twelve hours the false membrane had completely disappeared, the child breathed easier, the pulse was normal, the fever had disappeared, and only the submaxillary adenopathy remained. The child continued well for more than a month, when it was observed to speak through the nose. A day later speech was almost unintelligible, and saliva dribbled from the mouth. In the course of several days more, the head could not be held up, the chin falling upon the chest. Deglutition also became difficult. The knee-jerks, as well as the pupillary reflexes, were preserved. Sensibility was intact. The muscles especially enfeebled were the extensors of the neck, the rotators of the head, excepting the sterno-mastoid, the supraspinous and the elevators and abductors of the scapulæ. The fascial muscles also were largely affected, as well as the recti abdominis. Under electric treatment, improvement rapidly set in, and soon proceeded to final recovery.

Herpes Zoster.—Dr. A. H. Ohmann-Dumesnil recommends the following in treatment:

℞ Acidi arseniosi 003
Pulv. piperis nigris. 16
Extract gentian. . . . . q. s.
Misce. Fiat pilula No. 1. Sig. To be taken thrice daily after meals.

Externally, campho-phenique powder liberally sprinkled upon absorbent cotton and applied to the eruption, or the following:

℞ Pulv. camphoræ. 8.0
Bismuthi subnitrat. 16.0
Cretæ preparat. 32.0
Misce. Sig. Apply twice a day.

—*St. Louis Med. and Surg. Journal*, August.

Local Applications in Pharyngitis.—The following combination is an antiseptic stimulant and protective:

℞ Oil Scotch pine 2.0
Oil eucalyptus. 4.0
Oil cassia 2.0
Menthol. 1.3
Ext. balm gilead, fld. q. s., ad. 128.0
Sig. Spray on pharynx.

One of the best combinations to be used as a spray in the simple acute form of the disease is the following:

℞ Cocain. 0.5
Oil cassia 2.0
Menthol,
Gum Camphor. . . . . āā 4.0
Albolene, q. s., ad. 128.0

—Dr. Lewis M. Somers, in the *Laryngoscope*, August.

Chrobak's Use of Ovarian Extract.—A post-operation treatment in ovarian cases has been adopted by Professor Chrobak in order to obviate, if possible, the symptoms that often annoy the surgeon; and also to mitigate the disturbances peculiar to the menopause, and is recorded by him in the *Centralblatt für Gynäkologie*. He was led to administer ovarian tissue and to practice ovarian grafting. He accordingly had prepared an extract of the ovaries of sexually active and healthy cows, and had undertaken experiments to determine the practicability of ovarian grafting. The extract was employed in six cases in which the ovaries had been removed and in one of which, with perfectly normal genitalia, the climacteric molimina were severe. In three of the cases of the first group, in which the treatment had covered a period sufficiently long as well as in the remaining case, distinct improvement followed. The results of the transplantation experiments are detailed by Knauer. It was found that not only did ovaries grafted between folds of the peritoneum, or between fascia and muscle retain for a time at least, their integrity, but that they also continue to exercise their functional activity, as indicated by the maturation ovisacs.

Palliative Treatment of Uterine Cancer with Chlorate of Sodium.—This treatment, recommended by Brissaud for cancer of the stomach, has been found very effectual in arresting the pains, hemorrhages and discharges in cancer of the uterus, improving the appetite and digestion and the health of the patient in general and prolonging life, although it fails to stop the final progress of the disease. One patient treated by Boucher lived three years a "very supportable existence," although the inoperable cancer in the uterus and vagina was accompanied by a cancerous lesion of the stomach. He administers it internally in two to eight teaspoonfuls a day of the following mixture: Chlor. sod., 20 grams; orange flower syrup, 30 grams; acq. dest., 100 grams. It is also applied on a tampon to the neck of the uterus in a powder composed of equal parts of chlorate of sodium and subnitrate of bismuth with half the quantity of iodoform. If the latter produces symptoms of intoxication, viz., a coated tongue, bad taste in the mouth and the iodoform reaction in the saliva with calomel, it can be replaced by a tampon of salolized cotton dipped in a 20 per cent. solution of chlor. sod. In addition, a daily vaginal injection of 10 grams in a liter of boiled water is also given.—*Semaine Méd.*, July 15.

Pruritus Ani.—Dr. Charles G. Cumston says that patients suffering from pruritus ani are usually either arthritic or nervous. For local application the following are recommended:

℞ Menthol. 4.0
Alcholis.. . . . . 30.0
Aq. dest. 60.0
Acid acetic, dil 150.0
Misce. S. For external use only.

℞ Acid, carbolic. 5.0
Kalii hydrat 2.0
Ol. lini sem. 30.0
Ol. bergamot.. . . . . 9.5
Misce. S. Apply at bedtime.

In very severe cases deep cauterization of the parts with nitrate of silver or the thermocautery had been employed. Section of the nerves gave good results in pruritus of the anus, vulva and scrotum when the affection was very intense.—*Am. Gyn. and Ped.*, August.

Prolapsus Ani.—Dr. Platt resorted to the following procedure in the case of a child operated on in vain by other methods: At the junction of the skin and mucous membrane, just beneath the latter, a curved needle is inserted in the median line below, and a silk thread is carried half way around the anus and out again, in the median line above, reinserted in the same opening and brought out at the first puncture, making a purse-string suture. The little finger is then put in the anus and the string tied snugly around it. Apparently this would cause suppuration, and possibly a fistula. It does nothing of the kind, nor does it cause any pain afterward. The child has his stools in the recumbent position. If the feces are at all hard, injections are given to soften them. After three weeks the suture is withdrawn when it heals immediately with no return of the prolapsus. By this method the bowel is kept in place long enough to contract adhesions.—*Johns Hopkins Hospital Bulletin*, July.

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SATURDAY, AUGUST 22, 1896.

"MEDICAL DEFENSE."

It seems that of thirty-eight local branches of the British Medical Association, twenty-seven have written in favor of such alterations in law and practice as shall make the Association capable of acting in its corporate capacity for the defense of its members in case of lawsuits, etc. The meeting at Birmingham has adopted a resolution that may be considered as the preliminary step of the plan. This naturally brings into view certain criticisms—especially of those not unduly loving the Association or its managers—that the Association will find itself incapable of acting in this capacity, that it will prove expensive, that it is too huge and unweildy a body to act promptly and justly, etc., and lastly that it will lessen the respect of the general lay-world for the profession, and lead to a reversal of the esteem in which it has heretofore been held as a body of men not bent on self-aggrandizement or defense, but solely determined to alleviate the sufferings of humanity without thought of self.

To all of which criticism we would humbly answer, bosh! The esteem of the public for the profession may be most aptly synonymized by the word disesteem. And this disesteem is very largely due to the fact that the profession has heretofore shown little or no *esprit de corps*, and has been inexcusably weak in permitting the contempt of the world to stand as a confession of just judgment. By no means would we adopt the creed of ethics of the world, an eye for an eye, etc., but just as little should we longer hold our cheeks out for unjust and indiscriminate smiting. Self-defense is the first law of nature and when consciousness reaches anything like adult development it instinctively guards itself against injustice and unauthorized dictation. More than this the cause of the medical profession taken in its best sense is the cause of society and humanity. If they but knew it no one is more interested in encouraging the feeling of self-respect and honor among medical men than non-medical men. The evils of quackery exist because we are not united in crushing them out of existence, and in the estimation of the public our failure to do this is due to the fact that we are half-quacks ourselves, with but a faint-hearted belief in the therapeutic value or scientific quality of our own "science." It is one of the strangest facts of modern sociology that so large a body of men as we have no professional unity, that we present no united front to the enemies of our guild or to the public influences prejudicial to public health. Every other calling or occupation bands itself together and seeks to influence legislation or popular feeling by a hundred instrumentalities while we are content not only to do little or nothing and what little we do sporadically and by individual imitation and energy, but we allow our thousand enemies to deride us and "walk over us" by their unanimous and organized opposition. We trust the British Association may not listen to its critics so much as to prevent it from entering upon the proposed work, and that its success may inspire the American profession to undertake functions furthering our professional honor and importance, and the work we all have at heart.

MEDICAL CHARITY ABUSE IN ENGLAND—AND ELSEWHERE.

At last the British lay public is becoming aroused to the existence of what an editorial writer in *The Saturday Review* justly calls "an intolerable national scandal"—namely, the abuse of medical charities, and such being the case, we may hope for some abatement of the evil. From or through the medical profession we may apparently hope little or nothing at all. There are a hundred reasons for this, many of which have often enough been iterated and reiterated, and the fact is deplorable—but fact it is. It is true that there is a committee of the British Medical Association on medical charities, and the last report of its subcommittee through its chairman, Mr. THOMAS BRIDGWATER, concerning certain London hospitals (*Brit. Med. Jour.*, July 18, 1896, p. 139) is interesting reading—interesting from the positive proof it gives of the failure of "Reform within the Party," and also from the indirect evidence of the huge sin of omission left untouched by this or any other committee. The hospitals visited by the subcommittee were as follows: Charing Cross, Guy's, King's College,

London, Middlesex, Soho, Westminster, Westminster Ophthalmic, St. George's, St. Mary's, University, West London, Chelsea for Women. In six of these no attempt is evidently made to exclude those able to pay for medical attendance, and the notices to patients (that the institution is intended for those unable) recommended to be displayed in the waiting rooms, were not to be found. In only two or three was any thorough-going system of inquiry and exclusion in operation. The committee give examples of abuse they found, of people of property and even of wealth using the "charity" instituted for the poor. The report adds: "The painful fact is revealed that the wider the inquiry, the broader and deeper are the evidences of abuse of charity, not only in the metropolis, but through the country generally."

In his presidential address at the annual meeting of the Birmingham and Midland Counties Branch of the British Medical Association held last June, Mr. MESSITER devoted a portion of his time to this important question. The population of Birmingham is in round numbers 500,000. In 1885, in five hospitals there were treated 127,852 patients, and in 1895 the number had risen to 167,160.[1] "Can anybody pretend," said the lecturer, "that this system does not pauperize the public at the expense of the profession?" "How is to be remedied?" he asks. Acknowledging that the responsibility lies largely or entirely with medical men, he argues that the cure must come from them, but cites only two elements of relief—the return to "their own medical attendants" of first-aid cases after one treatment and the establishment of provident dispensaries, to relieve the hospitals, and where some small fee, tax or coöperative support shall be carried out. The cure is certainly homeopathic in "the thirtieth," or even a higher "potency"; Hahnemann might think it sufficiently high to suit him, and denominate it a cure by "olfaction."

The *Saturday Review* commends the recommendation of the 1890 Special Committee—a Central Hospital Board "empowered to receive and publish hospital accounts, to advise upon new schemes and to act generally as the authorized representatives of the public in the way of observing, appreciating and criticising hospital management and work," but also strikes at the heart of the matter in further urging outright governmental control. We suppose the writer to mean by this the local and not the supreme or central government. But whether local or general, we believe at least for England (if we as foreigners may hazard such an opinion) that there will be no adequate remedy found except in this way. The abuse has become so deep seated, the habit so inveterate that only by this means can thorough reform be brought about. As illustrating the extent to which this "craze" has gone, it may be mentioned that in a number of cases some hospitals spend as much as 25 per cent., 50 per cent., and even more, of what they receive in contributions and subscriptions in advertising and appeals. Is it possible to have a more perfect and flagrant *reductio ad absurdum* than this? Let it increase only a little more and longer and the advertisements for patients and contributions will equal in cost the income, and then perhaps there will come some attempt at separation of the sheep and the goats, and exclusion of the unworthy. This is, perhaps, a method of "reform" not intended or expected. And if it should come about, can any one doubt that it will be precisely the very poorest, those most needing the charity, and those *ex hypothesi* for whom it exists, who will be the excluded? Because—and this is the essence of the whole trouble—every person now treated gratuitously who is at all able to pay some fee (insufficient or not, matters not) by the very fact itself, excludes the worthy poor from receiving the aid intended for them and not for the hypocrites. Many hospitals and dispensaries now are compelled to limit the number presenting to a certain maximum in order that the work may be got through with at all by the overworked staff. And when one thinks of one or two men attempting to scientifically diagnose and correctly treat in one hour or so the diseases of this maximum the absurdity grows to disgust. In such a mess has the profession got itself! Financially and therapeutically stultifying itself and committing the double suicide with its eyes wide open and supposedly in its right mind!

Are we in the United States any better off? By only so much as we are a younger people and that our institutions have not yet crystallized their abuses into such set systems and inveterate habits. Perhaps also there is not the same hypocritic desire to deceive on the part of the lay public. But we can teach them to be hypocrites fast enough, and beyond all doubt we are hard at the job. It would be interesting to know the proportion of subscriptions for treating the poor spent by American hospitals in riotously profuse illustrations and pictures of the hospitals thus advertising for money and patients. Every room is photographed, the water-closets, views, grounds, etc., and one wonders whence in all the world come the hothouse plants. the evidences of luxury everywhere displayed with confident and exulting pride. We have seen street-car and poster advertisements of hospitals, their advantages, number of beds—and, in big "caps," the names of all their visiting and consulting physicians. We strongly suspect that this latter display as much as the desire for patients (*to treat gratuitously*) was the hidden motive that begat the device.

One indirect result of all this unseemly rivalry, but one of the most important, one moreover confirmatory of our maxim, is the fact of the influence it has on the

[1] In 1890 in the London hospitals there were treated gratuitously 2,429,219 out-patients, while in 1894 the number had risen to 4,108,039.

character of the over-worked members of the staff, and on the kind of treatment the patients receive. When there is a lively competition for patients, then, like over-affable storekeepers, there is over-treatment of the few patients in order to attract more—"I was most beautifully treated there, the doctor was so agreeable and nice, etc.—go there!" But this soon becomes tiresome and useless, and at least at the engorged and popular places the very reverse plan becomes operative. Are hospital manners improving or not? Besides this, it is positively known to us that in those hospitals in which no inquiry into the patient's financial ability or social standing is permitted (and from one reason or another this is very frequently so, though usually adroitly hidden) certain of the assistants or of the staff, feeling the shame of treating gratis those with better incomes than themselves, deliberately *mistreat* such with the (laudable?) intention of driving them finally to the private office. We mean by the word, that in minor ailments a painstaking diagnosis is consciously shirked, and slipshod treatment and placebos or what-not instituted. Are we as a profession equally with our British confrères unable to cope with the disgrace? Surely we are fast going the same road to the same institutionalism and habitualization of abuse that they have reached. Shall we proceed recklessly without any attempt to haul up? It is not only a question of "where we are at," but where we shall be at in a few years if, at the present rate, we continue our *facilis decensus*.

A MALPRACTICE CASE OF EXTRAORDINARY AND UNUSUAL CHARACTER.

That is the way RICHARDS v. WILLARD, which was decided July 15, 1896, struck the supreme court of Pennsylvania, and it did not hesitate to say so. The plaintiff claimed damages against the defendant for negligent surgical treatment for an injury to his leg. He alleged that he had sustained a fracture of both bones of his leg at a short distance above the ankle joint, and was treated, not for a fracture but for a sprain, and was thereby greatly injured. If there were no fracture the plaintiff had no case, for he did not contend that the treatment he received was improper treatment for a sprain. The defendant denied most positively that there was a fracture.

The singularity of the case arose upon the character of the testimony, and the conflict developed as to the great leading fact. Two surgical witnesses testifying from actual examination, declared that there was an actual compound fracture, one of both bones of the leg, and the other of the tibia. Against this, three surgical witnesses for the defendant testifying also, from an earlier and more complete and thorough examination, several times repeated, declared most positively and emphatically that there was no fracture whatever of either bone. Then, two experts, who examined the leg a year or more later, testified that, in their opinion, there had been a fracture. And again, on the other hand, nine experts who also made examinations at a later date, declared that, in their opinion, there was not and never had been a fracture.

A verdict for the plaintiff for $12,000 was returned by the jury. After a painstaking, careful and minute study of the testimony the supreme court felt constrained to say that it regarded that verdict as an outrage upon the administration of justice. Coupled with this is the suggestion that it must not be overlooked that the medical and surgical service rendered by the defendant to the plaintiff was entirely gratuitous. For many years he had been rendering such service to the hospital to which the plaintiff was brought after receiving his injury. If such gentlemen are to be harassed with actions for damages when they do not happen to cure a patient, and are to incur the hazard of having their estates swept away from them by the verdicts of irresponsible juries, who, caring nothing for law, nothing for evidence, nothing for justice, nothing for the plain teachings of common sense, choose to gratify their prejudices or their passions by plundering their fellow citizens in the forms of law, the court rightly further states that it may well be doubted whether our hospitals and other charitable institutions will be able to obtain the gratuitous and valuable service of, as it calls them, these unselfish and charitable men.

The trial judge showed his appreciation of the verdict by promptly striking down two-thirds of its amount, but the supreme court says that he might with still greater propriety have set the verdict aside altogether, because of its being against the law and the evidence, and grossly excessive in amount.

The plain truth, adds the supreme court, is that the plaintiff was probably afflicted with a tendency to tuberculosis, and when he received his injury that tendency became developed in the bones of his leg, and the disease called "tuberculosis of the bone" fastened upon him at the seat of the injury.

For these reasons, and on account of certain other errors in the trial, the supreme court reversed the judgment for $4,000 that was entered for the plaintiff.

Of the points of law of special interest established by this decision, it is to be noted that the supreme court holds that as the fate of the case in the hands of the jury depended upon the surgical testimony, there should have been, which there were not, instructions as to how the jury should reconcile the contradictions if they could, or, if they could not, then how they should regard it, or act in relation to it. They should also have been told just what the issue was, or the matter of fact upon which the case turned, as that it was whether there was a fracture or not, and whether the treatment administered was in

accordance with the usual and ordinary treatment practiced by competent surgeons in such cases.

As the actual fracture was not seen, it was only a matter of opinion whether it existed at all, and consequently the value of the particular testimony, the court holds, depended upon the competency of the witness to form a reliable opinion, upon the extent and character of the examination he made, upon the reasons given by him in support of his opinion, and upon the judgment of the jury as to the weight and character of the testimony submitted on both sides in support of the respective contentions, all of which should have been explained to the jury, with suitable comments.

Furthermore, it seemed probable that if the plaintiff had been content to remain at the hospital a week or two longer, he would have been cured of his hurt, and because he would not submit to such a reasonable detention, but chose to take the risk of leaving, which apparently brought upon him all his subsequent sufferings, the court says that he must take the consequences himself. And it being impossible to know what would have been the result of the treatment if the plaintiff had remained at the hospital, and this impossibility resulting from his own action, the court holds it would not be proper to attempt to separate the consequences of alleged negligent treatment prior to his leaving from the ulterior consequences resulting from his contributory negligence, after he left, in traveling and omitting to have medical treatment.

NO FULL DRESS UNIFORM.

It has been decided by the military authorities of the country, including Surgeon-General STERNBERG, at whose suggestion the action was taken, that there shall be no full dress uniform for the members of the hospital corps. The pomp and pride and panoply of war, the nodding plumes of grand parades and glittering military pageants are not for them. Although they may be *in* these parades and pageants hereafter, they will not be *of* them. When they are there they are there not for show but for business—in their fatigue suits, with their hand litters handy and their hospital corps pouches ready to furnish whatever is needful for the emergency. The process of trimming to fit their equipment to their duty has been going on gradually, and the present administration of the medical department is to be commended for the common sense which has dictated these changes. A cut was made in the right direction, when the useless sword was cut from the side of the hospital steward, and it was an equally good cut which relieved the men from the weight of the huge knife which they wore so long on their left side, and which was useful, so far as the ordinary observer could see, only in demonstrating how itself and its sheath could be utilized as extemporized splints for a broken humerus during some fancy drill for the popularization of "first aid." The hospital corps man may be considered now to be in full dress when he has his sling on his shoulders, his pouch by his side and his litter at the "carry." This is a great improvement. He has one less suit of clothes to purchase out of his allowance for clothing and to keep from getting moth-eaten during his enlistment; and as his clothing allowance has not been cut down correspondingly, he can now provide himself with white suits for hospital wear without having to invest some part of his small monthly stipend on this account.

And this leads us to consider what is and what ought to be the full dress uniform of the soldier. The medical department has solved this question for itself as regards the sanitary soldier. May we be permitted, from our professional standpoint, to suggest that the military authorities might profit by the example. Is the full dress uniform of the soldier that in which he is ready for any duty that may be required of him, or that which his care keeps from getting moth-eaten so that it may be on hand for special occasions of ceremony? Is it the uniform best suited to show off the mobility, gracefulness and power of the human figure? The officer who can not bring his hand to the salute without risk of dislodging his shoulder knot, can hardly say so, nor can the soldier who, from heat exhaustion or sunstroke, sinks, before the parade is half over, into the hands of the hospital corps to have his full dress coat unbuttoned as the first step of the first aid they have been taught in such cases. Military officers recognize the rigidity of the helmet, the stiffness of the padded coat and the general unsuitability of the full dress uniform to the active duties of the soldier; but they fear that in abandoning it there would be a risk of developing in the carriage of the men, we will not say a tendency to slouchiness, but some loss of that dignity or stateliness which is usually considered to be a visible manifestation of the reserve power of the individual. But this is a poor argument against a desirable reform. Troops that require to be splinted into a military set-up are not those that will win the battles of the future. The erect figure and martial bearing of the soldier should be the development of graded gymnastics and athletic games, and should ask nothing from the uniform except freedom of movement for every muscle in the well-developed physique.

The soldier's leathern stock died hard more than a generation ago. Is it not time to consider and reject what remains of the stiffness of antiquity about the full dress uniform? This may not be a consideration of national importance as concerns the uniform of our small regular army, but it becomes so when we consider the larger number of our State troops and the tendencies manifested in uniforming the various schools, public and private, of the country.

CORRESPONDENCE.

The Michigan Legislation League.

OPEN LETTER No. 3, TO THE MEMBERS OF THE MEDICAL PROFESSION (REGULAR) IN MICHIGAN.

DETROIT, MICH., Aug. 10, 1896.

To the Profession in Michigan:

The letter of Dr. Shurly in the JOURNAL of last week is surely a most astonishing document. He begins by saying that "of course there is no use of continuing a controversy" and then he proceeds to "*continue.*" In so doing the writer plunges head foremost into ancient history and appears to revel in confessing the iniquities and follies committed by himself and friends in former times. In that respect we are perfectly in accord with every word. The confessions have our sincere and cordial endorsement. But when Dr. Shurly presumes to accuse me and my friends of the crime of emulating the horrible example set by him and his friends twenty years ago, I have no choice but to charge Dr. Shurly with a degree of inaccuracy utterly unworthy of the man who occupies the exalted position of President of the Michigan Medical Legislation League!

Twenty years ago the medical faculty of the Michigan University found themselves face to face with a most trying dilemma. We had to choose whether we would stand by regular medicine and defend its good name against all comers and protect the university from the evils of sectarianism in medical teaching, or whether we would accept peace and popularity for ourselves by handing over the whole institution to the enemies of science and honest medicine. Dr. Shurly and his friends, by his own confession, cruelly and bitterly urged the latter alternative, but we preferred the former, and the time soon came when the profession and the public, with wonderful unanimity, applauded our course. The eloquence sneered at by Dr. Shurly certainly proved effective with the profession and the public although he admits that so far as he and his friends were concerned it was "*pearls before swine.*" In other and perhaps plainer terms I hereby solemnly declare that Dr. Shurly and his friends, in the emergency to which he refers to proclaimed with intense bitterness their ambition to secure the engrafting of homeopathy on to the great State institution of Michigan in the hope that thereby the University Medical School, with all its honorable record, might be crushed and disgraced and the embryo weakling, the Detroit College of Medicine built up on its ruins. At that time the scheme was to deliver the university into the power of irregulars. The scheme now is to hand over the whole profession of the State into the same hands!

Through all that painful and discreditable controversy, Dr. Shurly and everyone else knows full well that I and my associates in the faculty and in the profession never for a moment entered into any association or compromise with the homeopathic sect. On the contrary, in the medical societies and in the medical journals, in season and out of season, we consistently and persistently denounced them and all their pretentious claims to respect and public recognition as unfounded and fraudulent. We never justified or approved the graduation of a single homeopathic doctor. We never signed a single homeopathic diploma. Our utmost efforts were used at all times to convince everyone of the folly and iniquity of that peculiar form of mental and moral aberration called "*homeopathy.*" We opposed by all the means in our power, the crime of introducing sectarianism into the medical department. With calm, cool dignity we stood entirely aloof from the homeopathic department in the university, never condescending to contend with or notice them in any way, except when grossly attacked to defend ourselves. Consequently we enjoyed the privilege of seeing their institution pass through one long interrupted series of internal squabbles and scandals and failures until now it has got to be a by-word and a reproach among the educational institutions of the State and the nation, repudiated even by its own followers.

When Dr. Shurly ventures to draw a parallel between the admittedly shameful conduct and policy of himself and friends in that old controversy and our attitude toward his Michigan Medical Legislation League, he is as illogical and ridiculous as he would be if he propounded the following problem: "If a barrel of pork cost $10, how much would a gold mine in Nevada cost."

Even Dr. Shurly justifies now our course in the old homeopathic controversy, but I defy him and all his league to justify or defend their associations with the whole army of quacks and imposters for the purpose of obtaining legislative action, the aim and object of which, by their own published avowal, is to "protect the new beginner by limiting competition."

From the best information which we have been able to obtain, there would seem to be well-founded expectations that the "Michigan Medical Legislation League" is causing painful apprehensions as to its "viability." Its nearest and dearest friends, as we are informed, are seriously alarmed for it, and the hopeless term "stillborn" seems quite likely to sum up its whole unfortunate and discreditable career, suggesting the oft-quoted and pathetic couplet: "If I am so soon done for, I wonder what I was begun for." It seems pretty certain that the "League" is, to say the least, a "dead issue." In these circumstances it seems to be incumbent upon all right thinking members of the profession to bestir themselves and in the true spirit of professsional honor and wisdom endeavor to evolve some plan by which the best interests of humanity and of science may be sufficiently provided for in the matter of medical legislation in the State of Michigan. It is inconceivable that this must of necessity prove to be a hopeless task. If approached in a proper spirit it ought to be, if not an easy, still a practicable, undertaking, to construct a policy and perfect a program by which, while granting reasonable and just recognition to all parties and pathies outside the pale of regular medicine, the honor and the good name of the latter shall still be preserved safe from charges or insinuations of weakness, evil association and cowardice. If it should ultimately appear that the time is not yet ripe for the accomplishment of such a program surely the regular profession is the one party which is strong enough to maintain itself unaided in the future, as it has in the past, and while regretting for the sake of the sick and the suffering the unfortunate condition of affairs in Michigan, we as a school, or party, can best afford to go steadily forward in our honest endeavors to promote the interests of science and humanity. We of all others can afford to wait and hope for the time to come when the clouds of ignorance and quackery shall pass away and justice be done to science and humanity so far as the practice of medicine in our State is concerned. We take this opportunity to suggest to those who may feel an interest in the subject a careful study of the medical law of the State of Pennsylvania.

Without being in any degree prejudiced in favor of any individual law at present in operation, and while we stand ready now and always to do all in our power to secure a sound and satisfactory solution of this problem, no matter what source or quarter the idea may spring from, we feel free to say the Pennsylvania law would seem to contain many valuable and practical features. But in any event we are more than willing to coöperate with any man or set of men (so long as they are fit for gentlemen to recognize and associate with) for the purpose of accomplishing or in any way advancing the matter of medical legislation for the suppression of quackery with all its distressing accompaniments of cruelty and robbery, and at the same time conferring increased honor and power upon all those who are honestly and sincerely devoting their lives and labors to the

relief of suffering and the extension of science and art in medical practice.

We will be glad to communicate with all persons whose views are in accord with those set forth in these "open letters," or to listen respectfully to those who differ with them, if any such there be.

In conclusion, I am perfectly willing to accept and endorse the suggestion of Dr. H. B. Young of Burlington, Iowa, in his letter to our JOURNAL this week. There seems to me to be something of a professional wisdom and dignity in his plan which is a great deal more than anyone can claim on behalf of the avowed policy of the Michigan Medical Legislation League.

Here must end this correspondence so far as I am concerned.

DONALD MACLEAN, M.D.

Professor Klebs Repudiates an Attempt to Place Him in a False Light.

CHICAGO, ILL., Aug. 14, 1896.

To the Editor:—The enclosed is a copy of a letter which I have this day sent to the President and Secretary of the Harvard Evening Medical College and Hospital of Chicago.

I never authorized the use of my name in any capacity, in connection with said institution, and their using it in an Announcement, is entirely without a shadow of right.

Respectfully yours, EDWIN KLEBS, M.D.

"CHICAGO, ILL., Aug. 14, 1896.

"A. H. Tagert, M.D., President, and Walter M. Fitch, M.D., Secretary, Harvard Evening Medical College and Hospital, Chicago, Ill.:

"*Gentlemen:*—I have received a copy of your Announcement for the session of 1896 and 1897, and have to express my astonishment that you put me down as 'Professor of Morbid Anatomy, Bacteriology and Original Research' in your institution.

"I never consented to accept any such position in your school, and you are hereby notified that, unless you immediately suppress these Announcements, I will be compelled to take legal measures to compel you to do so. I have also made public announcement of the fact that I have no connection whatever with your school.

"Respectfully yours, EDWIN KLEBS, M.D."

It was Pernicious Fever.

NEW HAVEN, CONN., Aug. 13, 1896.

To the Editor:—Replying to yours of the 11th inst., would say, the case you allude to was probably one of malarial poisoning in a severe form, but the symptoms taken in connection with a recent visit to New York, Brooklyn and Newark, fully justified the suspicion of yellow fever. Her first symptoms were great lassitude and supra-orbital pain. She had a very severe chill lasting several hours, which was followed by high fever and nausea and vomiting. Temperature 106 degrees, followed by collapse. At one time the vomit was blackish. She had only one paroxysm terminating in collapse and death. An intense and rapidly developed jaundice, shortly before death. Some uterine hemorrhage.

The New York health authorities say however, that no source of infection is known to exist in that vicinity, either now or recently. No autopsy was made. The present opinion is that the case was one of pernicious or congestive fever.

Respectfully yours, C. A. LINDSLEY,
Secretary, Connecticut State Board of Health.

Another Diploma Mill in Wisconsin.

MADISON, WIS., August, 17, 1896.

The Attorney-General of the State of Wisconsin, Hon. W. H. Mylrea, has filed the following petition. Any of our readers having circulars or letters relating to this institution will confer a favor by sending them to this office.

In the matter of the application of the Attorney General for leave to bring suit to dissolve the corporation known under the name of the Milwaukee University (Medical and Dental College), to the Supreme Court of the State of Wisconsin.

The Attorney General of the State of Wisconsin respectfully shows:

That on or about the 24th day of February, 1896, there was formally organized under the laws of this State, by Dr. Samuel Shorer, Dr. Theodore Walther and Dr. Oscar Abert, a corporation to be known under the style and name of the Milwaukee University. That said corporation was formed without capital stock "for the purpose of teaching students the science of medicine and dental surgery, and preparing and educating them to practice as physicians and dentists, and conferring upon them, upon examination, and they having succeeded in passing such examination as to their knowledge of such sciences, the Degree of Doctor of Medicine or Doctor of Dental Surgery, or such other degree which may be proper, according to their knowledge exhibited on such examination.

Your petitioner further shows that heretofore he has been credibly informed that said corporation in breach of its trust has knowingly and wilfully abused the powers conferred upon it by its articles of association and certificate of incorporation, and also has knowingly failed to exercise its powers so conferred, and still wilfully neglects to exercise its powers and trusts as provided by law.

That after receiving said information and within a few days last past, your petitioner visited the city of Milwaukee, being the city in which said corporation is located, and visited its alleged college, located at the corner of Eighth and Chestnut streets, in said city and State. That your petitioner there met and interviewed said Dr. Oscar Abert, who claimed to be the secretary and treasurer of said corporation, as well as the dean of the dental faculty thereof. That at said time and place said Dr. Oscar Abert admitted that so far as he knew no records had been kept of the meetings of the board of directors, and that no by-laws had been adopted, or any means whatever taken to preserve the records of any of the acts or doings of said corporation, contrary to the statutes in such case made and provided. Said Dr. Abert stated to your petitioner that possibly such records had been made by the president thereof or by the dean of the medical faculty, Dr. Theodore Walther, but that no such records were kept in the University. That your petitioner visited the alleged office of said Dr. Theodore Walther and found that he was absent from the city of Milwaukee, and State of Wisconsin, and that no definite information as to his return could be obtained. That the office of said Dr. Theodore Walther was in a small building, the lower part of which was occupied as a saloon. That the keeper thereof informed your petitioner that said Dr. Theodore Walther might return to the city of Milwaukee on the following day and might not for some time. That the building of said college was formerly a residence, and later a small private hospital, and as your petitioner is informed, is not owned by said corporation. That the said Dr. Oscar Abert further admitted to your petitioner that all the college library in use in said building was two small bound volumes, printed in the German language, and a few pamphlets. That the said Milwaukee University does not own or possess the necessary appliances for the successful teaching of medicine, surgery and dentistry. That the University owns and possesses only one skull and a few bones of the human skeleton, and is not supplied with any of the ordinary paraphenalia used in teaching the sciences before mentioned.

Your petitioner further alleges upon information and belief that said college was formed without capital stock and that it does not even possess sufficient medical and surgical instruments as would be used by an ordinary member of the profession in every day practice. That no salaries have ever been paid to any teachers. That the only resident of the college building or person in charge thereof is said Dr. Oscar Abert.

That said Milwaukee University publishes a prospectus from which it appears that one Dr. Shorer is president thereof. That said Dr. Shorer is a resident at No. 571 Mitchell Street, Milwaukee, Wisconsin, and is engaged in the private practice of medicine. That one Dr. Carl Wagner is also a director of said corporation and resides at the city of Chicago, and that he has never visited or given any instruction in said college. That the vice-president of said college is one Dr. E. Schoene, a resident of Fredonia Station, Washington County, Wisconsin.

That your petitioner has been informed and verily believes it to be true that said Milwaukee University has issued a large number of diplomas conferring the degree of Doctor of Medicine or Doctor of Dental Surgery upon persons who have never even visited the city of Milwaukee. That said Dr. Oscar Abert admitted to your petitioner that quite a large number of such diplomas had been issued to parties residing in Germany, and that the sum received for each diploma issued was two hundred dollars ($200.00), and in addition the notary fees necessary to furnish the party with a certified copy of the articles of association and certificate of incorporation. That said diplomas, as your petitioner is informed and verily believe, were fraudulently issued to persons utterly unqualified to practice medicine, and who had never pursued a proper course of study, and who fraudulently intended to procure these diplomas for the purpose of enabling them to practice medicine and surgery, the same as the graduates of the best medical schools of the land. That said Dr. Oscar Abert further admitted to your petitioner that he was not a graduate of any medical college and had never received any authority to practice medicine, and that the only diploma he had ever received was that of Doctor of Dental Surgery. That he was unable to exhibit to your petitioner said diploma, but in lieu thereof exhibited to your petitioner what purported to be a license issued by the Board of Dental Examiners of the State of Illinois.

Your petitioner further alleges on information and belief that the said Milwaukee University was never organized or formed for the purpose of teaching students the science of medicine and dental surgery, and that said Milwaukee University has never prepared or educated, or intended to prepare or educate any person or persons for the purpose of enabling them to practice as reputable physicians or dentists, or for the purpose of conferring upon them, after due study and examination, the degree of Doctor of Medicine or any other degree, according to their knowledge as exhibited on such examinations. Your petitioner further shows upon information and belief that said corporation was not organized in good faith, but was knowingly and wilfully organized for the purpose of issuing diplomas in order to enable unfit and unskilled persons to secure authority to practice medicine and to enable the organizers and promoters of said Milwaukee University to secure large sums of money for false and fraudulent diplomas, not only from the innocent and unsuspecting, but from ignorant and corrupt persons who desired the pretended authority to practice medicine for their own selfish purposes.

That your petitioner is informed and verily believes that said Milwaukee University has caused large numbers of advertisements to be

inserted in newspapers throughout the different States of the Union soliciting such persons as are above described to apply to it for diplomas and licenses such as would permit them to practice medicine in this and other States without being qualified or prepared for such profession.

That said corporation has issued a great many diplomas to persons who have made no preparation or study of the science of medicine or dentistry. That said Milwaukee University sends out a large number of prospectus to different persons throughout the United States and foreign countries for the purpose of soliciting applications to purchase the fraudulent and bogus diplomas hereinbefore mentioned. That said corporation is in no wise a *bona fide* corporation, or organized for the purpose of advancing science, or for the maintenance and use of a college for the study of medicine and dentistry, or for any other lawful purpose whatever, but for the purpose of falsely and fraudulently obtaining money from the innocent and vicious.

Your petitioner further alleges on information and belief that to permit this corporation to carry on its alleged business is detrimental to public policy and good morals and contrary to the interests of the State of Wisconsin, as well as to the advancement of the science of medicine and dental surgery.

Wherefore, your petitioner asks leave to bring an action in the name of the people of the State of Wisconsin for the purpose of vacating the charter and annulling the existence of said corporation.

W. H. MYLREA, Attorney-General.

State of Wisconsin, } ss.
Dane County. }

W. H. Mylrea, being duly sworn on oath, says that he is the duly elected and qualified attorney-general of the State of Wisconsin, and acting as such. That he has read the foregoing petition and knows the contents thereof, and that the same is true of his own knowledge, except as to those matters therein stated on information and belief, and as to those matters he believes it to be true. W. H. MYLREA.

Subscribed and sworn to before me this 11th day of August, 1896.

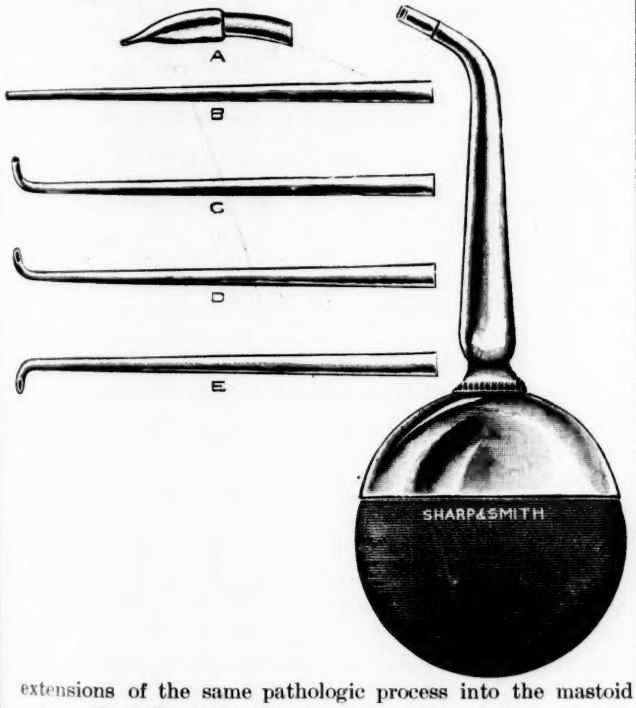
JOHN PRICE, JR., Notary Public, Dane County, Wisconsin.

NEW INSTRUMENTS.

A NEW MIDDLE EAR, MASTOID AND LACHRYMAL SYRINGE.

BY ALFRED HINDE, M.D.
CHICAGO.

In suppurative inflammations of the middle ear, both acute and chronic, and of both atrium and attic and also in the



extensions of the same pathologic process into the mastoid antrum the difficulties of removal of exudate, drainage, irrigation and disinfection of the infected parts are almost insuperable. For some years past I have had made and used drawn out and bent glass syringes, not unlike medicine droppers with elongated bent points. These, though exceedingly valuable for the purposes required have now been relegated to the curiosity shelf and the following syringe, modeled on their plan but indestructible and of greater capacity and power has taken their place in my practice and has been found a most useful and satisfactory instrument for the purposes required.

The syringe has four hollow tips, each seven centimeters long; the diameter of the ear end of each tip is one millimeter and that of the outer end three millimeters. One tip (B) is straight and the other three have a bend of four millimeters at right angles to the shaft. One of the bent tips (C) has an end opening at the ear end, one has an opening (E) on the right side at the tip, the other (D) has an opening on the left side at the tip; the two latter have closed ends. These tips fit on to a plain metal slip-joint on the other part of the syringe, which is as follows: From the extremity of the joint one centimeter, the shaft is bent at about an angle of 70 degrees and continues for a distance of four and a half centimeters, enlarging in caliber as it proceeds. At the widest end it fits upon a screw, the enlarged end of which is within a rubber ball. Between the screw and the rubber bulb is a metal cup into which the rubber ball fits. This cup covers one-third of the outer circumference of the rubber ball. The joint between the shaft and the ball being a screw requires a washer to render it water-tight. The syringe when filled with fluid has an emptying capacity of two drams as at present made, but larger rubber bulbs can be attached as desired, or a connection with an irrigating vessel be used. The metal parts are of German silver. The instrument can be readily taken apart and sterilized. The straight tip can be used and an excellent lachrymal[1] syringe improvised. Also the bent tip with the opening at its end can be used for irrigating the antrum of Highmore. For ear purposes the straight tip is used for emptying, disinfecting and irrigating the atrium. The bent tips are used in the attic. The one with the end opening is merely for injecting the attic cavity after the latter has been emptied of its necrotic ossicles and suppurating contents. The two bent tips with the lateral openings placed posteriorly when in use are for injecting and disinfecting the mastoid antrum through its opening into the attic after the latter has been cleared, and in those cases where every means of cure is resorted to before chiseling the mastoid, and where the latter operation is positively refused by our patient. Messrs. Sharp & Smith have made the instrument for me and to Mr. Cotter of that firm I must extend my thanks for aid in getting it out.

BOOK NOTICES.

A System of Surgery. By FREDERIC S. DENNIS, M.D., assisted by JOHN S. BILLINGS, M.D. Vol. IV. Tumors; Hernia; Surgery of the Alimentary Canal; Appendicitis; Surgery of the Liver and Biliary Passages; Of the Uterus; Of the Ovaries and Tubes; Gynecologic Surgery; Symphysiotomy; Surgery of the Thyroid; Surgical Peculiarities of the Negro; Surgery of the Female Breast; Use of the Roentgen Rays in Surgery. Profusely Illustrated. 8o, cl., pp. 970. New York and Philadelphia: Lea Bros. & Co. 1896.

This volume completes the most extensive system of surgery exclusively American yet published in this country. We must accord it a very high rank among the surgical works of the period. Indeed, it is not too much to say that the work, as a whole, is a fair reflex of American surgery of to-day as practiced in New York city.

Liberal use without credit is made of Prof. Nicholas Senn's scholarly article on enterorrhaphy, first published in this JOURNAL Aug. 12, 1893, Vol. xxi, p. 215. Of the forty-four illustrations in the chapter illustrating the methods of intestinal suture, nearly one-half of them may be seen in the article on enterorrhaphy. Nor is this all. It is impossible to resist the conclusion, on a fair comparison of the two, that the Senn article furnished the basis for this portion of the chapter, as almost without exception every author quoted appears in the Senn article, in which, indeed, are many not quoted in the book. The language descriptive of these sutures bears

[1] Since writing the above I have had a conical tip (A) one and a half centimeters long and with the small end of a diameter of one millimeter, and the latter diameter extending from the point for two millimeters distance. This conical tip fits on to the slip joint of the shaft as do the others, and is used for lachrymal syringing.

a very close resemblance to the Senn article, as may be seen on comparison.

In the article on hypertrophy of the breast two cases are mentioned, presumably on account of their exceptional size, neither of which approached in size the case reported by Professor Hamilton in this JOURNAL March 9, 1895, Vol. xxiv, p. 358, in which the glands after removal weighed respectively 27½ and 24½ pounds. Before removal, one of these breasts measured 42 inches in circumference at the nipple and the other 39 inches. The quotation from Williams also appears in Hamilton's article, but in the book there is a grammatic error in copying.

We notice in the excellent article on surgery of the thyroid gland, p. 830, that the old director of Kocher is figured. The one at present used by that distinguished operator has a fenestra near the end.

The chapter on the surgery of the alimentary canal from the ileo-cecal valve to the anus, by Dr. Lewis S. Pilcher, is one of the most satisfactory in the book.

The last chapter, by Prof. W. W. Keen of Philadelphia, "On the Use of the Roentgen X Rays in Surgery," presents in a condensed form the salient points of the subject, and gives this book the credit of being the first work on surgery in the English language to contain any reference to it. We can not close this notice without complimenting the editor on the happy conclusion of his arduous task, and the publishers on having produced a work with such uniformly excellent illustrations, and such splendid appearance. No general surgeon or general practitioner can consider his library complete without a copy of Dennis' System.

Treatise on Appendicitis. By JOHN B. DEAVER, M.D. Containing 32 full-page plates and other Illustrations. 8o, cl. Philadelphia: P. Blakiston, Son & Co. 1896. Chicago: W. T. Keener & Co.

This monograph contains an account of the history, anatomy, etiology, pathology, symptoms, diagnosis, differential diagnosis, prognosis, treatment, complications and sequelæ and after-treatment of appendicitis.

Dr. Deaver's work will be found in all respects satisfactory, the illustrations are accurate and clear and the author's advice is sound.

SOCIETY NEWS.

Alabama, Georgia and Tennessee Meeting.—The Tri-State Medical Society of Alabama, Georgia and Tennessee will hold its eighth annual meeting at Chattanooga, Tenn., October 13–15. The prospects are favorable for a large attendance.

Lehigh Valley Medical Association.—The sixteenth annual meeting of this association took place in Wilkesbarre, Pa., August 6. Dr. George M. Gould, by request, read a paper on "Some Curiosities of Medical and Surgical Practice," in which he cited a number of instances of children having been born at railway stations, theaters and in street cars, and gave an explanation of the cause of the incidents that came under his practice within the past few years. The following officers were elected for the ensuing year: President, Dr. J. R. Bucher, Lebanon; vice-presidents, Dr. Mary Greenwalt, Stroudsburg; Dr. G. T. Fox, Allentown; Dr. O. F. Harvey, Wilkesbarre; Dr. C. J. Leaver, Reading; secretary, Dr. Charles McIntyre; assistant secretary, Dr. W. S. Stewart, Wilkesbarre; treasurer, Dr. A. Stout, Bethlehem.

The American Electro-Therapeutic Association.—The sixth annual meeting of the American Electro-Therapeutic Association will be held Sept. 29–30, and Oct. 1, 1896, in Boston, Mass. Prof. A. E. Dolbear, Tufts' College, Mass., is the Chairman of the Committee of Arrangements. Dr. W. H. White, 222 Marlborough Street, Boston, Mass., is the Vice-Chairman of the Committee of Arrangements. Dr. Frederick H. Morse, Melrose, Mass., is the Chairman of the Committee of Exhibition.

The next annual meeting promises to be a greater success than any former one. Great interest is shown in all quarters; a large attendance is promised. Many candidates of national reputation are proposed for membership, so that the amendment to increase the limit of members becomes a necessity. The best talent has already announced papers, a larger number than ever before, at this early date; material almost sufficient to make a program for the session of unusual interest. There will be two discussions of importance in electro-therapeutics, interesting reports of all standing committees, several scientific lectures on the first evening, with demonstrations and stereoscopic views (including Roentgen X Rays, and electric principles in the treatment of diseases), given by eminent talent. The Committee of Arrangements has surprises in store for the social element in receptions and excursions. The exhibition promises to be a good feature and of more than usual interest. The fifth annual volume of the Transactions of the American Electro-Therapeutic Association is now on press, and will be ready for delivery about the end of July, 1896; illustrated, cloth bound, gilt lettering, octavo, about three hundred pages. EMIL HEUEL, M.D., Secretary.

The American Academy of Railway Surgeons.—The third annual meeting of this Association will be held in Chicago, Sept. 23–25, 1896. The officers are: President, John E. Owens, M.D., Chicago; first vice-president, L. E. Lemen, M.D., Denver, Colo.; second vice-president, F. L. Peck, M.D., Clinton, N. Y.; secretary, Webb J. Kelly, M.D., Galion, Ohio; treasurer, C. B. Kibler, M.D., Corry, Pa.; editor, R. Harvey Reed, M.D., Columbus, Ohio.

The following papers will be presented and discussed:

President's Address, J. E. Owens, M.D., Chicago.

Use and Abuse of Expert Testimony, with some Recommendations for its Improvement. An Attorney.

Diseases of Railway Men, caused by their Occupation. J. F. Pritchard, M.D., Manitowoc, Wis.

The Personal Equation among Train-men; its Importance Equal or Greater than the Color Sense. Illustrated by an automatic machine which records both. Robert Tilley, M.D., Chicago.

Penetrating Wounds of the Eye Ball. Archibald G. Thompson, M.D., Philadelphia, Pa.

Penetrating Wounds of the Eye Ball. G. A. Wall, M.D. Topeka, Kan.

Penetrating Wounds of the Eye Ball. T. J. Redelings, M.D., Marinette, Wis.

Penetrating Wounds of the Eye Ball, with Special Reference to Differential Diagnosis. D. C. Bryant, M.D., Omaha, Neb.

Remote Effects of Bone Trauma. D. S. Fairchild, M.D., Clinton, Iowa.

Medico-Legal Aspects of Floating Kidney. R. Harvey Reed, M.D., Columbus, Ohio.

Railway Surgery. Jessie Hawes, M.D., Greeley, Colo.

Emergency Surgical Practice. C. K. Cole, M.D., Helena, Mont.

First Aid in Railway Emergencies. James E. Pilcher, M.D., Columbus, Ohio.

Experimental Research into Shock in Abdominal Operations and Injuries. Geo. W. Crile, M.D., Cleveland, Ohio.

Shock and Collapse, with Special Reference to Amputations. Webb J. Kelly, M.D., Galion, Ohio.

The Delirium of Shock. R. S. Harnden, M.D., Waverly, N. Y.

Injuries of the Hands and Fingers. John McLean, M.D., Pullman, Ill.

An Experimental Study of Colles' and Pott's Fractures on the Cadaver. A. D. Bevan, M.D., Chicago.

The Cause and Mechanical Treatment of Subluxation of the Knee-Joint. S. L. McCurdy, M.D., Pittsburg, Pa.

Compound Comminuted Fractures at the Knee, with Report of a Case. W. A. Ward, M.D., Conneaut, Ohio.

Relation of Tuberculosis of the Knee to Injuries of said Joint. H. Reineking, M.D., Sheboygan, Wis.

Fractures of the Femur. E. M. Dooley, M.D., Buffalo, N. Y.

Past and Present Obstacles to the Radical Cure of Hernia. E. Wyllys Andrews, M.D., Chicago.

Treatment of Tramps and Trespassers. H. J. Williams, M.D., Macon, Ga.

Roentgen Ray Demonstration.

PUBLIC HEALTH.

Rochester Death Report.—The Health Board of Rochester, N. Y., report the number of deaths for the month of July as 262; 108 were under 1 year of age, 23 over 60, and 22 over 80 years of age. Four of the decedents were 90 years old.

Chicago Death Rate for July.—During July the total number of deaths in the city was 2,457. One hundred and twenty-two were due to violence, 58 were from typhoid fever, 367 infantile diarrhea, 385 acute intestinal trouble, and 107 heart disease. The death rate for the month was 1.52 per 1,000.

Sanitary Rules for Mothers.—The Board of Health of the city of Macon, Ga., has issued a little pamphlet for the benefit of mothers who have young children, and who need advice and warning in order to guard the health of their offspring from the diseases incident to hot weather.

Necessary Precautions.—Dr. Alvah H. Doty, Health Officer of the Port of New York, sailed August 8 for Cuba, where he will remain ten days collecting information for use in preventing the outbreak of yellow fever and smallpox among passengers en route to this port from Havana. The principal object of Dr. Doty's visit is to select and appoint a resident physician in Cuba upon whom he can call at any time for such work and information as might help him in the purposes of his own work here.

New Orleans Free from Smallpox.—New Orleans has practically stamped out the smallpox, which has been epidemic in that city for some time past. It made its appearance in 1895 and increased in the number of cases until in March of this year there were 334 cases and 83 deaths. Up to July 31 there had been 828 cases and 235 deaths this year. The methods adopted were general vaccination and strict quarantining. It is claimed that no such energetic campaign against the smallpox was ever conducted before. The climatic conditions and the nature of the population of New Orleans made this necessary.

Health in Michigan, July, 1896.—Reports to the State Board of Health, Lansing, by observers in different parts of the State, show that, compared with the preceding month, cholera infantum, dysentery, cholera morbus and diarrhea increased in area of prevalence; compared with the average for July in the ten years, 1886-1895, consumption, intermittent fever, remittent fever and cholera infantum were less than usually prevalent. Consumption was reported present in Michigan in the month of July at 213 places; typhoid fever at 82; measles at 65; scarlet fever at 44; whooping-cough at 40 and diphtheria at 27 places.

Inefficiency of Filters and Sterilizing Processes for Drinking Water.—A couple of years ago the Paris authorities offered a prize for the best process of purifying and sterilizing large quantities of water. The committee in charge report now that no such process exists, that every attempt thus far has proved a failure, and that the only means to secure suitable drinking water is to procure it from unpolluted sources. The nearest approach to this is the sand filter, with or without chemicals, but enough filters must be provided so that they can be changed and used in turn, and they must be under the incessant and scrupulous care of experts. The only process for separate establishments, schools, barracks, etc., is to boil the water and keep it exposed to the air while protected from dust. No known filter, large or small, will supply permanently suitable drinking water, as they all require care and supervison beyond the possibility of realization.—*Semaine Méd*, July 22.

Formalin as an Official Disinfectant.—According to *Hygienische Rundschau*, the above substance can be applied to the disinfection of rooms and goods such as is practiced by sanitary officials. An inquiry taken up at the Stockholm Hygienic Institute by Nils Englund into the best and most practical method among the many proposed for the disinfection of rooms and buildings, has demonstrated that the original recommendations of spraying with a dilute formalin solution, or the suspension of clothes saturated with formalin solution in the space to be disinfected are after all the best. Both these methods proved most efficient in the destruction of bacteria in rooms: 1. The spray method. Walls, furniture, etc., were thoroughly sprayed with a 2 per cent. formic aldehyde solution and the room closed for twenty four hours; 60 to 70 c.c. of the above solution sufficed for each square meter of surface. 2. Evaporation of solutions. Clothes were saturated with one pint of formalin solution in which half a pound of calcium chlorid was dissolved. The clothes were then hung in the room which was closed for twenty-four hours. For furs and books especially this method of disinfection with formalin proved specially useful. For dwelling-houses generally the spray method is exceedingly cheap. While working with it the eyes should be protected with spectacles and the mouth and nose with cotton-wool masks; the hands may be covered with vaselin or gloves.

Violent Deaths in Great Britain.—During 1895, 820 persons lost their lives in railway accidents, while 1,054 were killed in accidents to vehicles; 253 were run over by trains and 372 by vehicles. Other causes of accidental death were: Lightning, 15; cold, 91; football 16; cricket, 3, and cold baths, 2,172. Suicides, 2,052 men and 677 women.—*Prog. Méd.*, July 25.

Improved New Sanitary Prisons for Paris.—The new hygienic prisons at Fresnes, which are to take the place of the old ones inside the city limits are said to be models in every respect. The new Montesson school will receive the children until recently incarcerated in cells at the Petite Roquette, and teach them some useful trade amid beautiful, healthy surroundings. The men and the children are thus provided for, but the disgraceful old prison of St. Lazare for the women has not yet been superseded.

Preliminary Medical Examinations in Pennsylvania.—The State Medical Council having adopted a rule that all who expect to practice medicine in the State must submit to a preliminary examination. It will be conducted at the following places by the examiners named: Altoona, Prof. D. S. Keith; Easton, William W. Cottingham; Erie, H. C. Missimer; Harrisburg, L. O. Foose; Philadelphia, James F. C. Sickel; Pittsburg, George J. Luckey; Reading, E. Mackey; Scranton, George Howell; Williamsport, Charles Lose. The scope of the examination includes arithmetic, grammar, orthography, American history and English composition.

Inspection of New York State Charities.—We note with pleasure in the *Medical News*, August 1, an announcement that the veteran sanitarian and philanthropist, Dr. Stephen Smith of New York City, has been invited to assist in the reforming of certain of the charities of his State institutions that are said to receive more than $20,000,000 annually. Dr. Stoddard, of Rochester, the associate of Dr. Smith, although ten years or more his junior, is not new in the sanitary field. Dr. Stephen Smith and Dr. E. V. Stoddard, are members of a newly appointed committee of inspection of charities, under the New York State Board of Charities. Their duties relate largely to the economic expenditure of moneys, bestowed by the State upon hospitals, dispensaries, and other charitable institutions. Under the new State constitution, supplemented by laws passed last winter, it is provided that the State board of charities "shall visit, inspect and maintain a general supervision of all institutions, societies, or associations which are of charitable, eleemosynary, correctional or reformatory character, whether State or municipal, incorporated or not incorporated, which are made subject to its supervision by the constitution or by law." The committee of inspection will investigate all charities in Brooklyn and New York, both public and private,

and will organize a system of direct supervision over all charitable work. The State has appropriated $10,000 for this year's work. The charitable donations last year in New York State, public and private, amounted to the immense sum of $23,000,000. No other State spends nearly as much. It is to provide for the wisest distribution of this money that the present supervision has been provided.

Wide Dissemination of Typhoid Fever in North Carolina.—According to the *Bulletin* of the Board of Health for July, not less than fifty-two counties in the "Old North State," out of ninety-six, reported from one to twelve cases of fever in the month of June. In Alamance County a physician lost his life by that disease. In some counties the health officers report rather vaguely, "typhoid fever in nearly all parts." The Secretary, Dr. R. H. Lewis, again demands that the water supply shall be watched in these fever stricken communities. The *Bulletin* gives the following explanation of the policy of the State Board: In order to assist in locating the origin of typhoid fever and checking its further spread when occurring in more or less epidemic form (the means at the disposal of the board would not permit it in sporadic cases), arrangements have been made with Drs. Albert Anderson of Wilson and W. T. Pate of Gibson Station for bacteriologic examination of suspected drinking water. On the back of the permit for this analysis the following appears: "Parties desiring a bacteriologic examination of drinking water must first apply to the Superintendent of Health of his county (or to the medical health officer of his city or town if it have one), who will, if in his opinion there be just cause to suspect said drinking water as the source of disease, write to the Secretary of the State Board of Health, giving his reason for such suspicion. Should they be satisfactory to the latter he will forward this permit either to said superintendent or such other physician as he may designate. The sample must be taken and packed by a physician, in strict accordance with the following directions: The fact that nearly twice as many counties reported typhoid fever this month as did last suggests the advisability of calling attention again to the importance on the part of both physicians and householders of carefully looking after the means of preventing its spread. When it is remembered that 50,000 people die annually in the United States from this disease, of which North Carolina's quota would be about 1,000, to say nothing of the constitutions shattered, of the suffering, anxiety, expense and loss of time, the gravity of the subject is apparent and no excuse for repeatedly directing the attention of both the profession and the people to their duty in relation thereto is necessary. Enteric fever is by long odds the most fatal of all the preventable diseases which occur within our borders. And it is undoubtedly preventable, in large measure certainly, and, too, by very simple and inexpensive methods. That the drinking water is the medium of transmission in an immense majority of the cases, and that the water is contaminated by the undisinfected bowel discharges of another case is practically demonstrated. So that the preventive measures necessary may be summed up in an immediate change to a water supply clearly beyond the risk of contamination, or boiling the home supply, and in promptly and thoroughly disinfecting the bowel discharges and the soiled linen."

Health Report.—The following reports of mortality from smallpox, yellow fever and cholera have been received in the office of the Supervising Surgeon-General U. S. Marine-Hospital Service:

SMALLPOX—UNITED STATES.

New Orleans, August 1 to 8, 1 death.

SMALLPOX—FOREIGN.

Birmingham, Eng., July 25 to August 1, 1 case.
Bombay, India, July 7 to 21, 12 deaths.
Calcutta, India, June 27 to July 11, 3 deaths.
Callao, Peru, July 5 to 19, 36 deaths.
Genoa, Italy, July 24 to August 1, 3 cases, 1 death.
Havana, Cuba, July 23 to August 7, 39 deaths.
Licata, Italy, July 18 to 25, 2 deaths.
Madrid, Spain, July 7 to 28, 58 deaths.
Naples, Italy, July 18 to August 1, 15 cases, 6 deaths.
Odessa, Russia, July 18 to 25, 5 cases, 4 deaths.
Prague, Bohemia, July 4 to 25, 6 cases.
Rio de Janeiro, Brazil, June 27 to July 18, 21 cases, 6 deaths.
St. Petersburg, Russia, July 18 to 25, 10 cases, 1 death.
Tuxpan, Mexico, July 18 to 25, 1 death.
Warsaw, Russia, July 18 to 25, 2 deaths.

CHOLERA.

India: Bombay, July 7 to 21, 29 deaths; Calcutta, June 27 to July 11, 54 deaths; Madras, July 4 to 17, 3 deaths.

Japan: July 13 to 21, Kisto Tu, 1 case, 1 death; Osaka Tu, 1 case; Tokio Tu, 10 cases, 4 deaths; Fuknoka Ken, 5 cases; Ibaraki Ken, 2 cases, 1 death; Kagawa Ken, 1 case; Kanagawa Ken, 2 cases; Okayama Ken, 1 case; Saitama Ken, 1 case; Sidzuoka Ken, 1 case; Wakayama Ken, 2 cases, 1 death; Yehime Ken, 2 cases.

Egypt, July 14 to 20: Cairo, 16 deaths; Alexandria, 20 deaths.

During this period, July 14 to 20, there were 1,540 deaths from cholera throughout Egypt, exclusive of those occurring in Cairo and Alexandria. Total since beginning of cholera epidemic 13,343 cases and 11,099 deaths.

YELLOW FEVER.

Havana, Cuba, July 23 to August 6, 210 cases, 95 deaths.

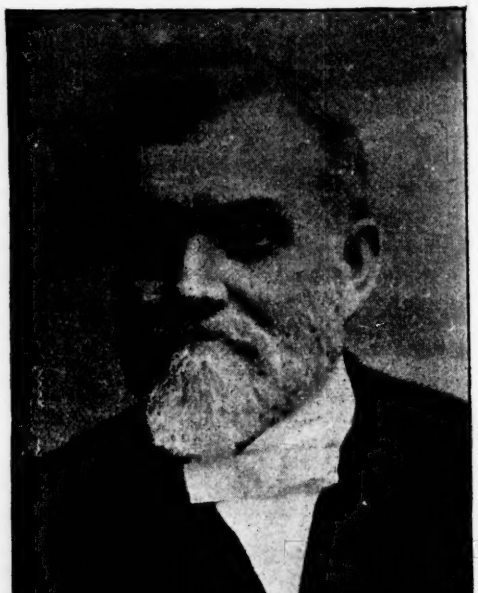
Rio de Janeiro, Brazil, June 27 to July 18, 20 cases, 13 deaths.

Sagua la Grande, Cuba, July 18 to August 1, 166 cases, 16 deaths. Vera Cruz, Mexico, July 30 to August 6, 3 cases.

According to reports of the Spanish Army Sanitary Corps in Cuba for the first twenty days of July, 1896, there were during that period 1,835 *new* cases of yellow fever admitted to the hospitals in Cuba. There were also during the same period 497 deaths among the yellow fever hospital patients.

NECROLOGY.

JEROME COCHRAN, M.D., Montgomery, Ala., died after a lingering illness August 17. He was the descendant of a



JEROME COCHRAN, M.D.
PORTRAIT FROM WATSON'S PHYSICIANS AND SURGEONS OF AMERICA.

Scotch-Irish family, and was born at Moscow, Tenn., Dec. 4, 1831. Having received a common school education, afterward supplemented by a course of private study, embracing biology, theology, metaphysics, and the foreign languages, he entered the medical department of the University of Nashville, and was graduated from that institution in 1861. During the Civil War he served as surgeon in the Confederate Army. In June, 1865, he established himself in Mobile, where he resided for some years. For the past fifteen years he resided in Montgomery. Of his writings may be mentioned: "Administration of Chloroform by Deglutition," "History of the Yellow Fever Epidemic of 1873," "The White Blood Corpuscle; its Physiology and Pathology," "History of the Smallpox Epidemic of 1874–75 in the City of Mobile."

As a sanitarian he was one of the foremost and through his efforts many acts of the Alabama legislature relating to State medicine were passed by that body. He drafted the "Act to Establish Boards of Health in the State of Alabama" (passed by the legislature in 1875), constituting the State Medical Association, the State Board of Health, and the County Medical Societies; drew the "Health Ordinance of the City of Mobile," as adopted in 1872, and revised in 1875; and drew the "Act to Regulate the Practice of Medicine in the State of Alabama" (passed in 1877), requiring satisfactory examination of all persons desiring to practice medicine in the State. He had been an ardent advocate of this measure since 1871. Since 1873 he had been chairman of the committee on public health of the State Medical Association, a position equivalent to that of health officer of the State. From 1868 to 1873 he was Professor of Chemistry in the Medical College of Alabama, and since that time he has been Professor of Public Hygiene and Medical Jurisprudence in the same institution.

He was associated with the late Surgeon-General Woodworth of the Marine-Hospital Service, and the late Dr. S. M. Bemiss of New Orleans on the Yellow Fever Commission, which investigated the yellow fever epidemic of 1878, and collected the history of each single case that was obtainable. This report was remarkable for the vast amount of painstaking labor expended upon it. The traveling expenses of Drs. Cochran and Bemiss were defrayed by the late Elizabeth Thompson of New York and the MS. was turned over to the National Board of Health by Dr. Hamilton, who succeeded Dr. Woodworth. We believe that this report was never printed, although extracts were from time to time printed. Dr. Cochran was one of the most active health officers in the United States, and a man of phenomenal energy. His sanitary work at Decatur, Ala., in 1888 was intelligent and thorough. As a man his character was that of one devoted to sanitary science, of great learning and unwearied industry. His long and faithful service to his State is such that it can not be overrated or excluded from the history of its progress. He had his "quips and oddities," what genius has not? But take him all in all, we shall not see his like. His friends, his State, his country and our ASSOCIATION have suffered a great loss.

W. H. ROSS, M.D., at Pensacola, Fla., August 8. He graduated from the College of Physicians and Surgeons, New York, in 1868, and was a member of the Florida State Medical Association. He had formerly been house physician in the Charity Hospital, New York, professor of anatomy in the Medical College of Alabama at Mobile, assistant State health officer of Florida, etc.

JOHN H. NORRIS, M.D. (College of Physicians and Surgeons, Keokuk, Iowa, 1870), at Metropolis, Ill., August 13, aged 66 years. He was ex-mayor of the city and prominent among the medical fraternities of Southern Illinois and Southwestern Kentucky. He was captain of Company M, Thirteenth Illinois Cavalry, served with distinction throughout the late war, and was breveted major.

WM. H. MATLACK, M.D., of Downingstown, Pa., died there July 12, aged 59 years. He was of the class of 1859, Jefferson Medical College.

DAYTON E. DECKER, M.D., of Woodbridge, N. J., died at Princeton, N. J., July 20. He was the only son of the late Dr. Dayton Decker and a graduate of the Long Island College Hospital, class 1874.

JOHN H. MCGIVERN, M.D., died at Plympton, Nova Scotia, July 21. His remains were interred at St. John, N. B., the place of his birth. He was a graduate of the New York University Medical College in 1883, and soon after began practice in the Harlem portion of New York city, where he became somewhat prominent in the cause of municipal reform.

WM. A. ROTHACKER, M.D., Cincinnati, aged 42, died after a prolonged illness. Dr. Rothacker was compelled to retire from active practice a number of years ago by reason of poor health, but up to that time he had occupied a prominent position in the local profession. He was at one time demonstrator of anatomy in the Medical College of Ohio, and edited a well-known work on anatomy. He graduated from the Cincinnati College of Medicine and Surgery in 1877.

SIMON M. CURTWELL, M.D., of Maysville, Ky., aged 78 years, died August 4. He was surgeon of the Sixteenth Kentucky Regiment during the war and was the oldest practitioner in his county.

S. T. ANDERSON, M.D. (Rush Medical College, Chicago, Ill., 1881), at Bloomington, Ill., of apoplexy, August 10, aged 52 years. He was a prominent member of the State Medical Association.——Horatio H. Johnson, M.D. (Harvard University Medical School, Boston, Mass., 1869), at Belfast, Me., August 4, aged 51 years. He was a member of the Maine Medical Association and formerly secretary of the Board of Medical Examiners of Waldo County.——J. L. Henot, M.D. (University of Vermont Medical Department, 1888), at Winsted, Conn., July 26, aged 38 years.——James Dunlap, M.D. (College of Physician and Surgeons, New York, 1850), at Northampton, Mass., August 3, aged 77 years.——Fred C. A. Kellam, M.D. (University of Maryland School of Medicine, Baltimore, Md., 1866), at Pringoteague, Va., August 6, aged 83 years.——Edwin T. Morrison, M.D. (University of Maryland School of Medicine, Baltimore, Md., 1887), at Baltimore, Md., August 7, aged 47 years.——Charles H. Weinholtz, M.D. (University of the City of New York, Medical Department, 1883), at New York city, August 7, aged 45 years.——C. C. Chaffee, M.D. (Vermont Medical College, Woodstock, Vt., 1835), at Springfield, Mass., August 8, aged 85 years.——James Northrop, M.D. (Geneva Medical College, Geneva, N. Y., 1857), at Woodstock, Ill., August 9, aged 71 years.——Daniel H. Brennan, M.D. (University of Buffalo, Medical Department, Buffalo, N. Y. 1885), of Albion, N. Y., at Buffalo, N. Y., of appendicitis, August 11.——Clarence O. Arey, M.D. (Department of Medicine of the University of Pennsylvania, Philadelphia, Pa., 1894), at Cleveland, Ohio, August 11.——Curran C. Smith, M. D. (University of Louisville, Medical Department, Louisville, Ky., 1850), at Richmond, Ky., August 13.——William Joseph Morton, M.D. (Louisville Medical College, Louisville, Ky.), at Racine, Wis., August 14, aged 89 years.——Professor Kékulé, at the University of Bonn, noted for his important works on organic chemistry.

MISCELLANY.

Preliminary Question for the Court.—The preliminary question whether a witness offered as an expert has the necessary qualifications, the supreme court of Minnesota says, in Sneda v. Libera, decided June 29, 1896, is for the court, and is largely within its discretion.

A Good Showing for an American Medical College.—We are informed that by some flaw or omission in the return of preliminary qualification of the Barnes Medical College of St. Louis to the Missouri State Board of Health, the unprecedented number of 101 matriculates were notified to appear before the said board to show cause why they should not be debarred from matriculation, all of whom responding to the summons, after a rigid personal examination and searching scrutiny of their credentials, were found by the board to be fully qualified by first grade teacher's certificate or academic or high school degree, many of them showing exceptionally high qualifications.

Speculative Evidence.—It is no more speculative to say that hernia causes pain, and might terminate fatally, so the appellate division of the supreme court of New York holds, in the case of Stever v. N. Y. C. & H. R. R. Co., decided June 17, 1896, than it is to say the same of appendicitis or peritonitis.

Consequently, the court holds that it was not incompetent to ask a physician, who had testified to a party having what he termed "direct hernia," whether "a breach of that kind at any time becomes dangerous to life, or becomes dangerous or painful in any way." The answer here was: "I think it dangerous," and then the witness added, without any further question, "It may come out and become strangulated so it is impossible to return it without an operation." This reference to strangulation it is intimated was open to criticism as being speculative.

Thyroids in Catalepsy.—After giving detailed histories of cases treated by thyroid medication, Dr. Joseph G. Rogers makes the following deductions: 1. That in conditions marked by inhibition of sensory, motor, and mental activity, without gross organic lesion, such as obtain in katatonia and in certain types of stuporous insanity and melancholia, we may expect benefit from thyroid medication, judiciously used. 2. That the effects of thyroids in full dose bear a striking resemblance to many of the symptoms of Graves' disease, namely, orbicular weakness, consecutive conjunctivitis, skin eruptions, and temporary bronzing, without icterus of eyes, profuse local fetid sweats, subjective sense of heat and thirst, excessive metabolism, decided tachycardia, and the absence of any fixed relation between pulse rate, respiration, and temperature. 3. That, in so far, the theory of Möbius, that Graves' disease is due to hyperactivity of the thyroid gland, is strongly supported.—*Am. Jour. of Insanity*, July.

Foreign Graduates in French Medical Schools.—Important modifications have been made in the regulations for the admission of foreign students to the medical schools of France, and for granting them permission to practice their profession in that country. Heretofore, American medical students who went to Paris with the view of graduating from one of the medical schools were allowed certain facilities. When they were graduates of well-known American colleges, or held a diploma of doctor of medicine issued by a reputable foreign scientific institution, they were permitted, upon application being made through the American embassy, to follow the regular courses of the French medical schools, the same as French students who had graduated from the French faculties, and if successful in the final examination, were awarded the same diploma as those to Frenchmen, which carried with it the privilege of practicing in France. The number of foreign students having considerably increased in numbers and the proportion of those who remain in Paris to practice their profession having also become much larger, the French government has adopted a stricter rule for the admission of foreigners to the French medical schools. In the future foreigners desirous of obtaining the same diploma of doctor of medicine as that awarded to Frenchmen will have to submit to the same conditions imposed upon French students, that is, the diploma they may have obtained abroad or in any private institution will not be considered, and before being allowed to register at any of the French medical schools they will have to produce a French state diploma of *Bachelier de l'enseignement classique*, and the *Certificat de sciences physiques, chimiques et naturelles*. To foreign students who do not intend to practice medicine in France the facilities usually extended to them will be continued and even enlarged. But they will only be entitled to a special diploma granting no rights to practice in France. These regulations were issued on the 21st ultimo, and are not applicable to foreign students already registered.

Cure of Sarcoma in Algeria by Native Doctors.—Legrain describes several cases of sarcoma which he had removed and examined histologically. These had been treated by native doctors, who applied a tar obtained from certain bushes in the Sahara district, among them juniper. In each case the sarcoma was entirely and permanently cured. The question arises whether the supposed sarcoma may not have been a tuberculous affection, as tar is especially efficacious in them, while it has no effect on sarcoma, and it is not always easy to distinguish a sarcomatous from a tuberculous tumor. Legrain adds that epitheliomata are unknown in Algeria except as they appear on a European. This may possibly be due to the vegetarian diet without meat, and absolutely without pork. Verneuil and Reclus asserted long ago that the herbivorous animals were much less liable to cancer than the carnivora, and they ascribe the six-fold increase in the number of cancers at their hospital during the last forty years, to the increased consumption of meat by the laboring classes.—*Bulletin de l'Académie de Méd.*, July 21.

New Method of Anastomosis Without Opening Organs.—Souligoux unites the stomach to the intestines, or one part of the intestines to another, or the gall bladder to the intestines, without opening into the organs, by creating artificially a process similar to the pathologic process in tuberculosis or cancer when a communication is established between organs. This is accomplished by seizing and squeezing a piece of the intestine in a clamp forceps; when released, this piece is reduced to a thin transparent membrane no thicker than a piece of cigarette paper, about 4 cm. long by 2 to 3 wide. A similar piece of the other organ is crushed to correspond, and the two bruised portions are then united and one long edge sutured. The crushed surfaces are then lightly cauterized with potassa, the assistant instantly sponging off any liquid that exudes. The rest of the suture is then completed, and if any of the black produced by the caustic shows, a separate suture is made to enclose it. The bruised walls give way very soon, in forty-eight hours at farthest, and communication is established, with the formation of adherences that strengthen the suture. Some of the Paris surgeons are enthusiastic in their praise of this new "easy, certain and elegant" method of anastomosis, by which all the dangers of opening into vital organs are obviated. One necropsy showed perfect union with only a small fragment of the bruised tissue still adhering. Reclus advises cocain instead of ether in these operations. Chaput has been experimenting with the thermo-cautery which he prefers to the cold forceps for this purpose, and makes a row of separate sutures around the eschar. He also proposes a circular union on this principle, by thermo-cauterizing the bunch formed by ligating the intestine, and then making a circular suture enclosing it. He has had perfect success on dogs. Raynier very sensibly doubts whether this will prove practicable, as it totally closes the intestines until the bruised portion breaks away.—*Bulletin Méd.*, July 19, and *Sem. Méd.*, July 22.

Gleanings.—Vaccination made compulsory in Peru and vaccine institute established at Lima. (*Cronica Méd.*, May 31.)——Diphtheritic toxins exposed to a weak electric current for three or four days become transformed into effective antitoxins. (*Gaz. d. Osp. e d. Clin.*, July 19.)——The International Institute of Bibliography founded last September (Brussels) to collect in one catalogue all the scientific, artistic, literary and intellectual publications of the world, advocates the general adoption of the American Dewey decimal system. (*Progrès Méd.*, July 18.)——Bequest of $20,000 to the Paris Académie de Médecine from Mme. D'Ernesti, and twice this sum bequeathed by M. Marelleau to the society that aids tuberculous children. (*Union Méd.*, July 18.)——International Congress of Applied Chemistry met at Paris, July 27, with more than fourteen hundred members. Monument erected at Dijon to Woicikowsky, who performed the first successful ovariotomy in France. Red Cross corps of Scotch collies trained to carry all that is needed for first aid to the wounded and seek them out as they fall. In readiness for the autumn maneuvers of the German army. (*Progrès Méd.*, July 18.)——Menstruation of healthy child at 46 months. (*Marseille Méd.*, No. 9.)——

Case of akinesia algera, nineteen years in reclining posture, lower extremities spastic, atrophic and powerless; cured by suggestion. (*Wien. Klin. Rundsch.*, July 16.)——Epidemic of icterus in children, eighteen cases. (*Deutsche Med. Woch.* July 16.)——Honorary title of M.D. conferred upon Bismarck by the University of Jena. Dermatitis and alopecia caused by exposure to the Roentgen ray during a month of experimentation with the fluorescent screen. (*Deut. Med. Woch.*, July 23.)—Apparently healthy child of healthy mother gives syphilis to wet nurse and her family, who sue for damages. Court of appeals (Poitiers, France) decides for the defendants, as no fault could be proved. (*Journ. de Méd. de Paris*, July 19.)——Twenty-nine cases of abdominal typhus treated with guaiacol salicylate with negative results. (*Polnit. Gas. Botk.*, No. 2.)——Successful extirpation of wandering spleen and left ovary, both much degenerated, without interference with pregnancy. Average annual consumption of alcohol in Russia from 1827 to 1863 4½ liters per capita; since been decreasing, until in 1893, it was only half this amount, which is less than in any other country, Norway excepted. (*St. Peters. Med. Woch.*, July 18.)——Recent case of infection emphasizes importance of sound teeth in a wet nurse. Gelatin found efficacious in arresting hemorrhages, 5 to 10 per cent. solution, at 95 degrees. Death follows enema containing 40 grams of boric acid. One-fifth to one gram boric acid fatal to guinea pigs. Barth reports two severe cases of pneumonia cured by digitalis, daily doses, 2 gr. pulv. digitalis leaves in an alcoholic infusion with syrup of orange peel. (*Semaine Méd.*, July 15.)——Seasickness prevented by suggestion. (*Semaine Méd.*, July 22.)

Pasteur Monument Committee of the United States.—The following circular has been issued:

It has been decided to erect in one of the squares of Paris a monument to the memory of M. Pasteur. Statues or bust will also no doubt be located at his birthplace and in other cities. The Paris committee has, however, wisely determined that the statue obtained through international effort shall be located at Paris, where it will be seen by the greatest number of his countrymen and also by the greatest number of his admirers from other lands. The Paris committee has for honorary members the President of the Republic and his cabinet, together with about one hundred and sixty of the most prominent officials, scientists and other distinguished citizens of France. The active members of the committee are J. Bertrand, President, member of the French Academy, Perpetual Secretary of the Academy of Sciences. J. Simon, Vice-president, member of the French Academy, Perpetual Secretary of the Academy of Moral and Political Science. Grancher, Secretary, member of the Academy of Medicine, Professor in the Faculty of Medicine. Bruardel, member of the Academy and of the Academy of Medicine, Dean of the Faculty of Medicine. A. Christophle, Honorary Governor of the Credit Foncier, Deputy from l'Orne. Count Delaborde, Perpetual Secretary of the Academy of Fine Arts. Duclaux, member of the Academy of Science and of the Academy of Medicine. Magnin, Governor of the Bank of France, Vice-President of the Senate. Baron A. de Rothschild, banker. Roux, Assistant Director of the Pasteur Institute. Wallon, Perpetual Secretary of the Academy of Inscriptions and Belles-Lettres. The Paris committee has kindly extended the opportunity to the people of the United States to assist in this tribute of appreciation and love and have authorized the organization of the Pasteur Monument Committee of the United States. The members of this committee gladly accept the privilege of organizing the subscription, and of receiving and transmitting the funds which are raised. We believe it is unnecessary to urge any one to subscribe. The contributions of Pasteur to science and to the cause of humanity were so extraordinary, and are so well-known and so thoroughly appreciated in America that our people only need the opportunity in order to demonstrate their deep interest. All can unite in honoring Pasteur. He was such an enthusiastic investigator, so simple, so modest, so lovable, and yet so earnest, so great, so successful—his ideals were so high and his efforts to ameliorate the condition of humanity were so untiring that we anticipate an enthusiastic response from the whole civilized world. The United States will vie with the foremost of nations in this tribute. Chemists, zoologists, physicians and all others interested in science will wish to be represented. No one is expected to subscribe an amount so large that it will detract in the least from the pleasure of giving. A large number of small subscriptions freely contributed and showing the popular appreciation of this eminent Frenchman is what we most desire. This committee supplies subscription blanks, which should be returned in the accompanying envelope, together with a money order, check or draft covering the amount subscribed. All checks, etc., should be made payable to "Treasurer Pasteur Monument Committee," and when received by the secretary a numbered receipt will be forwarded to the sender. The original subscription papers will be forwarded to the Paris committee for preservation. It is our purpose to do our work as largely as possible through societies or other organizations. We prefer to have each organization appoint one of its members as an associate member of this committee with authorization to collect and forward the subscriptions. The amounts thus far subscribed by individuals vary from fifty (50) cents to ten (10) dollars. It is hoped that no one who is interested will hesitate to place his name upon the list because he can not give the maximum amount. Please let this receive your early attention and in that way assist our committee which must conduct correspondence with the societies of the entire country. The committee consists of Dr. D. E. Salmon, Chairman, Chief of the Bureau of Animal Industry; Dr. E. A. de Schweinitz, Secretary, President of and representing the Chemical Society of Washington, Chief Chemist Biochemic Laboratory; Dr. Geo. M. Sternberg, Surgeon-General U. S. Army; Dr. J. Rufus Tryon, Surgeon-General U. S. Navy; Dr. Walter Wyman, Surgeon-General U. S. M. H. S.; Prof. S. F. Emmons, U. S. Geological Survey, representing the Geological Society; Prof. Lester F. Ward, President of and representing the Anthropological Society of Washington; Dr. G. Brown Goode, Treasurer, Assistant Secretary of the Smithsonian Institution; Dr. Wm. B. French, Representing the Medical Society of the District of Columbia; Hon. Gardiner G. Hubbard, President of and representing the National Geographical Society; Mr. C. L. Marlatt, Assistant Entomologist U. S. Department of Agriculture, representing the Entomological Society; Dr. Ch. Wardell Stiles, Zoologist U. S. Bureau of Animal Industry, representing the Biological Society of Washington.

The JOURNAL will be pleased to forward any subscriptions received for this purpose.

Cincinnati.

THE MORTALITY REPORT for the week gives: Zymotic diseases 20; constitutional, 30; local, 50; developmental, 6; violence, 6; under 5 years, 32; total, 112. Annual rate per 1000, 16.49; corresponding week, 1895, 104; 1894, 115; 1893, 95.

AT THE MEETING of the State Board of Charities held at Longview Asylum the reports from the different institutions show them to be all full and in many instances it has been necessary to refuse admittance on account of the over-crowded condition. Superintendent Ratliff of the Dayton Hospital said that he thought insanity was increasing but that the old prejudice against institutions for its treatment was dying out. The new hospital at Massillon which is being built at a cost of over $700,000, will accommodate 2,000 patients and is expected to give relief to the other institutions. Much of the session was spent in discussing the cost of supplies at the various hospitals, and suggesting methods to equalize prices. At Cleveland cereal foods for each inmate for the past six months cost $2.09, while at Longview they cost $3.23.

DR. VAN DER VEER TAYLOR, a recent graduate of this city, has been appointed Medical Director of the Cincinnati Young Men's Christian Association. Dr. Taylor will act in conjunction with Physical Director Fisher and will also deliver a course of lectures during the winter on anatomy and physiology before the class in preparatory medicine.

A CINCINNATI PHYSICIAN has been arrested upon the charge of violating the U. S. Postal laws in sending through the mails a threatening postal card. The card was sent to a man whom the doctor claims owed him $106, and whom he threatened to put to trouble if the account was not paid by a certain time.

OWENSBORO, KY., and vicinity is suffering from an invasion of typhoid. There is hardly a farm house along the banks of Mud River, for twenty miles, in which there is not at least one case. Berea, Ky., is also suffering from a typhoid epidemic.

THE CONTRACTS for the Massillon insane asylum have been

made to the extent of $265,000, a portion of which it is claimed will have to be annulled by reason of the fact that the amount is in excess of the appropriations made by the last Legislature, although that body authorized the trustees to expend $50,000 in excess of the appropriations. Attorney-General Monnett and State Auditor Guilbert have decided that this is unconstitutional.

THE MIAMI MEDICAL COLLEGE have completed the organization of their new dispensary and announce the following staff: Chas. H. Castle, clinical director; G. L. Bailey, assistant clinical director; Robt. Suttler, ophthalmology; Chas. E. Caldwell, surgery and andrology; C. R. Holmes, ophthalmology; J. A. Thompson, laryngology; E. W. Mitchell, medicine; R. B. Hall, gynecology; W. McMillan, surgery; Julius H. Eichberg, medicine; E. H. Shields, surgery and andrology; George Sudhoff, medicine; F. W. Langdon, neurology; H. W. Bettman, medicine; R. H. Ingram and H. K. Dunham, medical assistants; W. E. Schenck, neurological assistant; Ernest Jacob, pharmacist.

JAMES T. SCOTT, M.D., of Greentown, committed suicide August 10. Dr. Scott was mentally deranged as the result of a kick from a horse received forty years ago.

THOMAS FREELAND, M.D., of Boston, Ind., was shot by a patient named Philip Cochran on the 11th of this month.

Louisville.

KENTUCKY INSTITUTE FOR THE EDUCATION OF THE BLIND.—An address has just been issued by the trustees of this institution, which contains much of interest to the profession as well as to those who have under their care children who are so afflicted. Kentucky established her school for the blind in 1842, the eighth school of its kind in the country, last year there being 132 inmates of the Kentucky school out of a total of 3,757 blind children educated in thirty-five such schools. The purpose of the State in founding such a school was to give to the child with defective sight as good an education as is offered to the seeing child and, in addition, to give it instruction in manual training. In 1884 the general assembly passed an act providing for the addition of a department in a separate building for the care of the colored blind children of the State. The board has provided that the children under their control have the best teachers, faithful and devoted servants, improved educational appliances, and have also provided that the children shall be properly and kindly cared for as regards their clothing, food, shelter and health, all free of cost to blind children of the State. Notwithstanding this, about 70 per cent. of all the blind children of the State between the teachable age of 6 to 16 years are allowed to grow up in ignorance, without any share in the advantages so freely offered by the State. The American idea of a school for the blind is as far removed from its being an asylum on the one hand, as it is from its being a hospital for treatment of diseases of the eye on the other. Its work is strictly educational. A blind child should be sent to school as soon as it can get along without a nurse, say at 6 or 7 years of age. Every year's delay after that renders the task of its education difficult and incomplete. From the moment it reaches the school the sense of touch has to be persistently trained. The kindergarten is of inestimable value for this purpose, and the work done in this department excites the admiration of every visitor. After the kindergarten the child studies things and models of things, and in its study of geography, models in sand and clay the surface of the State and country and the grand divisions of the globe. He is taught to read and write and cipher, studies grammar, history, natural philosophy and all the branches of a good education. If he has any musical ability it is scientifically and sedulously cultivated, for it is in the practice of the art of music that he can compete with his seeing comrades on more equal terms than in any other occupation. He is also given a course in the workshop, where he learns to cane chairs, make brooms and practice simple upholstery, such as the repair of lounges and mattresses. Piano-tuning is also taught to those who are capable of learning it. The girls are taught the use of the needle, and learn as they progress how to patch and darn and mend, how to knit and use the sewing machine, how to cut out, fit and make their own garments. In this course of study and development, extending over eight or ten years, the blind child gains a confidence in his own powers that enables him to overcome, to a great extent, the natural awkwardness of his blindness. He is to a considerable extent enabled to earn a livelihood for himself. The school term is from September to June, and at its close the children are returned to their homes, as it is the desire of the trustees to maintain as far as possible the home ties of the child.

THE PUBLIC SERVICES.

General Order No. 37.

The following is a copy of the order discontinuing full dress uniform for the Hospital Corps of the U. S. Army:

HDQRS. OF THE ARMY, ADJUTANT GENERAL'S OFFICE,
WASHINGTON, Aug. 13, 1896.

* * * * * *

II. By direction of the Secretary of War, from and after this date, the issue of the full dress uniform to hospital stewards, acting hospital stewards and privates of the Hospital Corps, U. S. Army, will be discontinued, and an equivalent allowance in money value of white cotton duck clothing will be made instead.

By command of General Miles.

SAMUEL BRECK, Acting Adjutant General.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Aug. 8 to Aug. 14, 1896.

First Lieut. Henry A. Shaw, Asst. Surgeon, will proceed to Ft. Brady, Mich., without delay, and report for temporary duty at that post.

Lieut.-Col. Alfred A. Woodhull, Deputy Surgeon-General, and Major Charles Smart, Surgeon, are detailed to represent the Medical Department of the Army at the twenty-fourth annual meeting of the American Public Health Association, to be held at Buffalo, N. Y., Sept. 15, 1896.

Major Clarence Ewen, Surgeon, extension of leave of absence granted on account of disability is further extended one month on account of disability.

First Lieut. Benjamin Brooke, Asst. Surgeon, so much of S. O. 69, A. G. O., March 23, 1896, as directs him to report to the president of the examining board appointed to meet at San Francisco, Cal. April 14, 1896, for examination by the board, is revoked.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending Aug. 15, 1896.

Asst. Surgeon M. K. Johnson, detached from the U. S. S. "New York," and to the coast survey steamer "Bache."

P. A. Surgeon G. A. Lung, ordered to the receiving ship "Vermont."

P. A. Surgeon E. R. Stitt, detached from the receiving ship "Vermont" and ordered home on waiting orders.

Change of Address.

Furay, Chas. E., from Omaha to Chadron, Dawes Co., Neb.
Galbraith, T. S., from Norman, O. T., to Seymour, Ind.
Gedge, D. M., from Honolulu, H. I., to 108 Stockton St., San Francisco, Cal.
Houston, Jas., from Ingersoll, Ont. to Swartz Creek, Mich.
Kuhlman, F. E., from 2245 Mulphany St. to 2323 Cass Ave., St. Louis, Mo.
Kneedler, W. L., from Barracks to 2003 D St., San Diego, Cal.
Paine, H. M., from Atlanta, Ga. to West Newton, Mass.

LETTERS RECEIVED

Apollinaris Company Limited, The, London, England; Alderson, Jas., Benton, Wis.; American Sports Publishing Co., New York, N. Y.
Breakey, W. F., Ann Arbor, Mich.; Benson, John A., Chicago, Ill.; Bell, A. N., Brooklyn, N. Y.; Burr, C. B., Flint, Mich.
Castle, Chas. H., (2) Cincinnati, Ohio; Cobleigh, E. A., (2) Chattanooga, Tenn.; Chatterton, A. L. & Co., New York, N. Y.
Dunham, W. R., Keene, N. H.; Daland, Judson, Philadelphia, Pa.; De Schweinitz, E. A., (2) Washington, D. C.; Dibrell, J. A., Jr., (2) Little Rock, Ark.; Doliber-Goodale & Co., Boston, Mass.; Davis, N. S., Jr., Chicago, Ill.; Davis, F. A., Chicago, Ill.
Edes, Robert T., Jamaica Plain, Mass.; Earp, S. E., Indianapolis, Ind.
French, Pinckney, St. Louis, Mo.; Flint, Austin, New York, N. Y.
Gihon, A. L., New York, N. Y.; Gillette, Wm. J., Toledo, Ohio.
Hughes, C. H., St. Louis, Mo.; Hervey, E. V., Indianapolis, Ind.; Haldeman, F. D., Ord, Neb.; Hodges, J. Allison, (2) Richmond, Va.; Hyndman, J. G., Cincinnati, Ohio; Hummel, A. L. Advertising Agency, New York, N. Y.; Hurdy, J. N., Indianapolis, Ind.
Imperial Granum Co., (2) New Haven, Conn.
Jennings, J. Ellis, St. Louis, Mo.
Kercher, J., Chicago, Ill.; Kreider, Geo. N., Springfield, Ill.
Laughlin Pen Co., New Haven, Ind.
Millard, Perry, H., St. Paul, Minn.; Manley, Thos. H., New York, N. Y.; Mylrea, W. H., Madison, Wis.; Murphy, Francis E., (2) Kansas City, Mo.; Morenius, M., Chicago, Ill.; Macrae, D., Chicago, Ill.; Mettler, L. Harrison, Chicago, Ill.; Montgomery, L. H., Chicago, Ill.; McBride, M. A., Leesville, Tex.; Middleton, W. D., (2) Davenport, Iowa.
Newman, Henry P., Chicago, Ill.
Ott, Isaac, (2) Philadelphia, Pa.
Parker, F. L., Charleston, S. C.
Raymond, W., Roston, Mass.; Reed, R. Harvey, Columbus, Ohio.
Shurly, E. L., Detroit, Mich.; Sharpe, N. W., St. Louis, Mo.; Smith, Frank Trester, Chattanooga, Tenn.; Scribner & Hilliary, Boonton, N. J.; Schooler, Lewis, Des Moines, Iowa; Steele, A. J., St. Louis, Mo.
Thornton, Wm. M., Charlottesville, Va.; Tuley, Henry E., Louisville, Ky.
West, C. I., Washington, D. C.; Woods, T. J., Batesville, Ark.; Wilbur, C. L., (2) Lansing, Mich.; Wingate, U. O. B., Milwaukee, Wis.; Whitford, Wm., Carlisle, England; Weaver, W. H., Chicago, Ill.; Woodward, A. P., San Francisco, Cal.; Whamond, A. A., Chicago, Ill.; Withrow, J. M., Chicago, Ill.; Westmoreland, C. W., San Luis Patosi, Mexico.